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THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY

UNDER THE DIRECTION OF THE COUNCIL

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
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PRESIDENT'S ADDRESS

OUR ASSOCIATION AND ITS ACTIVITIES

SOME SUGGESTIONS AND PLANS FOR THE SUCCESS OF THE NEXT ANNUAL SESSION

FRANK B. WYNN, M.D.
President-Elect of the Indiana State Medical Association
INDIANAPOLIS

The physician who has been honored by election to the presidency of the Indiana State Medical Association has imposed upon him certain obligations from which he cannot escape. It is not a perfunctory office. Standing as the official spokesman of 3,000 intelligent physicians, representing every locality of the state, it becomes his duty to exemplify their ideals and aspirations in the work of the organization. The Association must stand for the most recent progress in medicine, contribute its own part toward this end, and lend itself with intelligence, enthusiasm and discretion to instruction of the public relative to the prevention of disease and the increase of human comfort and efficiency. Toward the attainment of these ends a brief inventory may be given, of what it is hoped to accomplish at the next annual session.

First of all, as contributing to the success of the next session let there be instilled into each member of the Association a sense of responsibility and interest. No error is more common than for the average practitioner to belittle his own capacity and ability. He is prone to say, "I am just a plugging practitioner. I am so busy doing night work or attending obstetric cases that I cannot prepare a paper or read as much as would be necessary in its preparation. Let the men who wish write papers. I'll go down to the session and have them handed out to me all prepared." This is an attitude most unfortunate for the one who assumes it. He is the chief loser. The main purpose of the organization is to stimulate each physician to do his best. This does not imply that every member should write articles. It does mean, however, that every one who comes to the annual session should prepare himself for it. Let each one out of the richness of his opportunities study his cases with earnestness, read medical journals with fidelity, and keep close to his heart ever the thought that he will bring to the session some idea worth while to aid a fellow practitioner. In other words, let him come to the session primed upon some topic and prepared, if the occasion arises, to express an opinion lucidly. Such an attitude toward the work of the Association will redound greatly to its advantage, but the chiefest benefit will come to him who carries out in practice this line of action. He becomes the general who is prepared for battle when it arises. In his case it may be at one time a very sick patient when there are grave difficulties of diagnosis and treatment; at another, it is before a medical association when the right thing needs to be said in the right way. In furtherance of what is here suggested it is hoped that in ample season, before the date of the session, a tentative program may be published which will enable every man to prepare himself in a way to contribute something in exchange for what others do for him. No greater good can come to the Association than by a general awakening of interest and enthusiasm. During the coming months each member should have constantly a mind open and alert for the truth, as he shall see it from day to day. This is cultivating the spirit of scientific inquiry, which makes the mind receptive for the truth when it is presented and potent for its execu-

tion when occasion demands. One of the occasions will be at the session in September.

The scientific program naturally commands first attention. It should include, besides the newer things indicative of medical progress, such topics as will appeal in a practical way to a large part of the membership, awakening general interest and discussion. Of paramount importance is it to secure a well-balanced program. No one should feel aggrieved if his paper should be found unavailable. Unavoidable circumstances might make it such. True to their difficult task, the members of the Committee on Scientific Work cannot be governed by personal prejudices. They are obliged, however, to weigh with extreme care various points in the arrangement of the program. Such, for example, as the subject treated, quality of the essay, geographic location of the writer and the number contributing from the same county, past service of the writer and date of his last contribution, duplication of papers, avoidance of topics recently considered in meetings, the absence of papers upon subjects which should receive attention and perhaps the drafting of some one to give them consideration. It goes without saying that the committee will be most grateful for suggestions concerning the program. Societies referring papers, or individuals desiring to read papers should have at least the titles and better still the manuscripts in the hands of the committee by June 1, 1915.

A feature of interest will be the inauguration of progressive scientific demonstrations covering the fundamental branches of medicine, as well as diagnosis and treatment. It will include anatomy, physiology, chemistry, pharmacology, pathology, bacteriology, newer laboratory methods, Roentgen-ray diagnosis, special methods of therapeusis and research exhibits. In charge of these demonstrations will be a committee of twenty-five, each of whom has already given a pledge to prepare an exhibit for demonstration. These will be scheduled for a definite time. Each demonstrator will present his subject to groups of fifteen, and be allowed ten minutes, at the end of which time, the ringing of a bell will announce the shift of each group to a new demonstrator. Registration for this feature and a certain amount of disciplinary supervision will be necessary to the success of the plan.

One of the curious travesties upon modern civilization is that the public is ever ready to attribute selfish motives to the action of physicians in their support of laws for disease prevention. So often have we, as individuals and through organizations, aided movements which in preventing disease actually diminish our incomes, it is pertinent to ask if we should not give more attention to our own personal welfare. The motives which actuate commercial, industrial and labor organizations are self-interest—to secure their just dues. May it not be true that amongst the medical profession conditions prevail which work hardships and injustice to our brethren and ought to be righted? Imbued with the thought that such is true a committee has been appointed to consider "The Physicians' Welfare," the purpose of which will be to collect data from the members and elsewhere bearing upon the problem.

Another subject with social, moral, professional and public health aspects is urged upon the attention of the Association. From the days of Hippocrates, true physicians have been unalterably opposed to the induction of abortion, except when, after consultation and mature deliberation, the life of the mother is endangered. The consensus of opinion amongst medical men is that there is a growing laxness of the public conscience and even among doctors toward criminal abortion. What general practitioner has not been approached upon this subject, not merely by the unfortunate girl, but many times more frequently by married people. Generally they are of the higher social classes and in the writer's experience even clergy are included. A few years ago a distinguished member of our Association, impressed by the seriousness of this growing criminal tendency, presented before a gentlemen's literary club an essay entitled "The Rights of the Unborn." The subject was treated in a tactful and scholarly manner and deep indeed was the chagrin of the essayist to have it treated in a spirit of levity by those from whom a different attitude should have been expected. It is not overstating the case to say that married women often ask unblushingly for something "to bring them around." The newly married excuse themselves on the ground of youth, multitudinous social obligations which must be met, apartment residence where children are not wanted, etc. The apologies offered, frequently ludicrous, always excite disgust, that woman should so often seek to avoid conception or crave the induction of abortion, thus thwarting the greatest function and blessing of her sex—the bearing and rearing of children. This much for the culpability of the laity. On the other hand it is pertinent

to enquire if we are doing our full duty, privately and publicly, in regard to this important question. Do we spend time and effort to explain to patients the grave physical and moral consequences of going counter to nature? And do we follow this by an exhortation setting forth the joy of parenthood, making plain that children are the cement which bind together the foundation stones of the domestic structure? Are we mindful of our public duty, proclaiming the wisdom and righteousness of the family and pronouncing always our condemnation of those evil tendencies which lead to a decadent nation? A committee will give itself earnestly to the study of this question, in which your thoughtful cooperation is asked.

Quackery and nostrum consumption are evils against which the ethical profession has inveighed from time immemorial. There are signs of progress. In Indiana better laws enacted chiefly through the agency of our Association have brought substantial improvement. The press and periodicals are the avenues through which these nefarious influences seek their dupes. Here it is gratifying to note at least a taming down of the flagrancy of quack advertisements. All praise to the few which in their columns have had the courage to put aside the lucrative offers of the quack and pronounce against his dishonest methods. The awakening of this movement should command our organized and sympathetic support. Likewise it is well that we look at ourselves, lest we contribute to the growth of conditions nearly akin to quackery. Has it not happened over and over again that through the laudatory literature of pharmaceutic houses and the persuasiveness of shrewd detail men we have prescribed and perhaps extolled certain proprietaries until a trade value has been established for them? And then to our amazement and chagrin have not some of these same proprietaries been flaunted before the public through the lay press, with the statement that eminent physicians have advised their use? To take reckonings in reference to these important matters a committee has been appointed to collect data and make recommendations.

With reference to the various committees having work relating to the public health, let it be said that for this session less attention will be given to particular diseases which are preventable and more devoted to methods and collateral phases of public-health work; for example, receiving especial consideration will be such topics as social and industrial factors in relation to the cause and cure of disease; child hygiene and sanitation in connection with the public schools; all-time health officers, etc.

It is urged that members receiving blank forms from the chairman or secretary of committees fill them out with care and promptitude. It is only fair to those undertaking this really important work that we should give them hearty and business-like cooperation.

With the season's greetings and the heartiest good will to every member of our great Association, let us look forward with hope, laboring diligently to make the year bring forth golden fruit for medical science, for ourselves and for the organization.

SPECIAL ARTICLES

SOME PHASES OF THE YEAR'S PROGRESS IN THE FIELDS OF MEDICINE AND SURGERY

MEDICINE

Garrette Van Sweringen, M.D.
FORT WAYNE

One is almost bewildered at the task of even casually reading over the countless papers which have been presented along the lines of internal medicine for the year. Many of these papers contain facts of too much importance to be passed by in a review of this nature, yet the writer realizes the impossibility of touching upon or even mentioning all of them.

Extremely interesting and of great importance is the work being done on oral sepsis and its relation to constitutional diseases. It has been demonstrated by many investigators that the constant contamination of the blood-stream by infectious material emanating from a focus of infection within the oral cavity is responsible for a large variety of diseases. Gilmer and Moody[1] have successfully isolated from alveolar abscesses the following bacteria: *Streptococcus viridans, Streptococcus mucosus* and *aureus, Bacillus fusiformis* and the *Micrococcus catarrhalis.* Rosenau[1] cites a case of acute arthritis in which he was able to obtain by culture a streptococcus like that found in rheumatism from a necrotic patch of tissue the result of a crushing injury to the hand. The accident antedated the arthritis several weeks. Rosenau[1] points out the fact "that in some of the more chronic infections, the character of

the micro-organisms found in the lesion may be quite different from the character of the micro-organisms in the focus of infection at the same time. This, however, does not minimize the importance of the focus of infection in any way. The organisms found in the tissues have undergone a change. This fact should be borne in mind whenever autogenous vaccines are used. The poor results in some cases of arthritis, for example, following the use of autogenous vaccines prepared from tonsils or other presumable focus, may be due to the fact that the organisms present in the focus at the particular time when the cultures were made were not like those actually infecting the tissues. And if so, the vaccine would fail to contain the proper antigen."

The consensus of opinion seems to be that no physical examination is complete without a thorough interrogation of the oral cavity for foci of infection. Craig[1] says: "It seems a far cry from mouth infection to mental disease, but when one witnesses profound depression clear up following the drainage of several alveolar pus-pockets, one is persuaded that chronic intoxication, the result of absorption from the pent-up infectious process, was an etiological factor. Otalgia and tic douloureux have long been thought dependent upon bad teeth in some cases, but the observation that stubborn neuritis of the sciatic or other nerve trunk or of the brachial plexus sometimes disappears after cleansing out the alveolar disease is of comparatively recent date." Localization of infection in any portion of the body may be the contributing factor to a host of diseases. Billings[1] enumerates the following as possible results of a focus of infection: acute rheumatism, chronic deforming arthritis, gonorrheal arthritis, malignant endocarditis, myositis, myocarditis, septicemia of various bacterial types, tuberculosis, nephritis and visceral degeneration, certain infectious types of thyroiditis with or without hyperthyroidism, pancreatitis, acute and chronic, with or without resulting glycosuria, peptic, gastric and duodenal ulcer and cholecystitis.

Billings advocates team work of the clinical and laboratory workers, and one might add that of a competent dental surgeon. A roentgenogram is essential to a diagnosis of alveolar abscess. In view of the above findings it would seem that the word "idiopathic" as formerly applied to certain diseased conditions, as for instance "idiopathic osteomyelitis" must be relegated to the junk heap of meaningless terms.

The many papers on the use of the Roentgen ray in the diagnosis of lesions of the stomach and intestines prove beyond any question of doubt that the Roentgen ray is almost indispensable for an accurate diagnosis of lesions in this region of the body. The work of the roentgenologist is responsible also for much valuable data on the physiology of various portions of the alimentary tract, proving out many facts and disproving others which we had heretofore accepted as true for lack of any better method of examination to guide us. There is a division amongst the roentgenologists as to the value of methods in obtaining the best result in their work. Questions of technic need not detain us here. Suffice it to say that more than a working knowledge of use of the Roentgen ray is essential to a proper interpretation of the result in every case. The results in the diagnosis of duodenal ulcer are interesting. George and Gerber,[6] in a series of 82 operated cases, studied by serial roentgenography, made a correct diagnosis as to extent and location in 78 cases; in 3 cases a diagnosis of ulcer was made but there was failure in minor details. In but 1 case of this series was there absolute failure in diagnosis. This result in accuracy of diagnosis should be contrasted with the report by the same men of 150 operated cases, with a negative Roentgen diagnosis in which duodenal ulcer was not found in a single case. Van Eiselberg[4] places Roentgen examination first of the methods of diagnosis of gastric ulcer. George and Gerber,[6] after a discussion of the "direct and indirect method" of Roentgen diagnosis of gastric and duodenal lesions, say "that the careful production of serial plates frequently gives important evidence, especially positive evidence in regard to gastric and duodenal lesions, that no one can find on the fluorescent screen." After enumerating numerous sources of error in the technic of Roentgen examination of gastro-intestinal lesions, these authors sum up as follows: "We believe that by means of the Roentgen bismuth examination of chronic gastro-intestinal diseases we can often obtain positive diagnostic evidence which is unobtainable by any other means. By this method we can usually separate these chronic cases into medical and surgical classes."

That the diagnosis of duodenal ulcer, based upon the findings by any one method of examination, cannot be made, must be apparent. The unsettled state of the value of all diagnostic signs of duodenal ulcer is evident when the following statements are taken into ac-

count: Kummel[3] agrees with Moynihan that "history is everything, physical examination nothing," and thinks that hunger pain and periodicity of the symptoms unreliable evidence of duodenal ulcer. Occult blood in the stools he holds to be a valuable sign, especially if it is absent from the gastric contents. Roentgen ray often gives the most trustworthy information. Bier[3] is inclined to accept Moynihan's views, and thinks the Roentgen-ray findings of great value, but not an infallible indication of ulcer. Kemp[1] considers the recent work done in giving prominence to duodenal ulcer a step backward rather than forward, for time has shown that the syndrome they have emphasized does not belong to duodenal ulcer, but to juxtapyloric ulcer, regardless of whether the ulceration extends down into the duodenum or up into the stomach. Periodicity of the disturbance is not peculiar to duodenal or juxtapyloric ulcers, but is observed in other stomach affections at times, intervals occurring in which all the symptoms may disappear.

Nothing strikingly new has been offered in the treatment of duodenal ulcer. It would seem to the writer that the trend is toward the medical treatment (aside from complicated cases, as perforation, etc.) rather than the surgical treatment of the disease. Kummel says of duodenal ulcer: "Just as appendicitis cannot be cured medically, so I believe that without operative interference cure is only exceptionally effective." Ewald[3] believes that 50 per cent. are curable by medical means alone and that surgeons have an incorrect view of the internists' results, as they see only the uncured cases. Of Ewald's[3] 82 cases only 18 were operated upon.

White and Leonard[6] report their findings in the examination of 114 cases of suspected cancer of the stomach by Roentgen-ray methods. Cancer was ultimately proven in 40 cases and ultimately ruled out in 66 cases, 8 cases still remaining doubtful. Thirty-three cases of cancer are excluded from this series as being well developed, leaving 81 early, latent or suspected cases. These 81 cases were classed at the end of the clinical and Roentgen-ray examination as follows: 1 (or 2) early, 6 latent, 62 ruled out, 12 (or 11) doubtful. In all cases a complete physical examination was made, usually including tests of secretion and motility of the stomach, and an examination of the feces and gastric contents for blood. With the Roentgen ray both fluoroscope and plates were used, immediately after a bismuth meal and at six- and twenty-four-hour intervals.

One is convinced, after reviewing the numerous articles on the use of the Roentgen ray in the diagnosis of gastro-intestinal lesions, that while there is great danger of placing too much dependence in the interpretation of the Roentgen-ray plate or plates in the diagnosis of these lesions, yet it is amply evident that no single method of diagnosis has as yet equaled the Roentgen ray in value, and it seems to the writer that the conclusions of Holding[2] are correct, i. e., (1) The Roentgen method is the most accurate and at the same time the most expensive single method of diagnosing gastro-intestinal lesions; it is also the safest and most valuable to the patient. (2) An exploratory operation for diagnosis is usually evidence of inadequate Roentgen methods. (3) A preoperative Roentgen examination in abdominal cases (a) will save many a case from the shock of an exploratory operation; (b) should shorten the time consumed at operation; (c) should improve surgical statistics. (4) A postoperative Roentgen examination of abdominal cases will lead to important modifications in the technic of such operations just as post-treatment Roentgen examinations of fractures has modified general surgical methods. (5) This subject can scarcely be summarized more tersely than has been accomplished by Schmieden, who says with both wisdom and moderation: "A scientific diagnostician will not diagnose gastric lesions on Roentgen-ray examinations alone, nor should he diagnose important gastric lesions without using the Roentgen rays."

In the treatment of carcinoma of the stomach, like carcinoma elsewhere, the result will depend largely on the time of diagnosis. Early recognition of the disease offers the best chance of treatment, and surgery the only chance of cure. In this connection it is of interest to read the report of Tunckenbein[2] of the treatment of inoperable cancer with autolysates. Remarkable improvement was noted in fifteen cases, following the intravenous injection of an autolysate derived from the patient's own tumor. This treatment is effective for both the primary and the metastatic tumors. Prompt and marked relief from pain (the pain subsiding within a few hours following the injection in one case) is the chief effect of this treatment. The case in which the effect on the pain was so prompt had resisted the action of morphin. All the cases in this series were benefited by this treatment in one or two weeks.

The literature has been full of papers on the use of salvarsanized serum in the treatment of

syphilitic infection of the central nervous system. McClure[2] reports his results in nine cases of luetic infection of the central nervous system with this method (Swift and Ellis). Four cases were treated with salvarsan intravenously, mercurial inunction and intraspinous use of salvarsanized serum. There was diminution in the cell count, the protein content and the strength of the Wassermann in the spinal fluid; the blood Wassermann remained unaffected up to the time of leaving the hospital. Two cases of tabes were relieved of subjective symptoms and the number of cells in the cerebrospinal fluid reduced. A case of taboparesis showed no change in laboratory findings and only slight change symptomatically. One case of paresis showed no improvement and progressively grew worse. McClure concludes that the fact that improvement may occur, even if only apparent, warrants the use of the intraspinous treatment in a disease otherwise hopeless. Craig and Collins[2] believe that salvarsan is the most efficient agent we possess in treating syphilitic nervous disease; the use of mercury intramuscularly between injections has also proven of great benefit.

Stuart[2] reports excellent results in cerebrospinal syphilis by intraspinal injections of either salvarsanized serum or of small doses of neosalvarsan combined with the intravenous administration of neosalvarsan. In a number of tabetics the clinical signs improved, lightning pains and gastric crises subsided, and in one patient the knee jerks which had previously been absent reappeared. He discusses the intracranial methods of introducing remedies with the cerebrospinal fluid, and believes those methods should be used which are least likely to injure the brain. He thinks that cortical applications possess certain advantages over the intraventricular injections, for it should be remembered that a number of treatments will of necessity have to be given and one is hardly justified in submitting a patient to the risks of repeated cranial operations when just as good results are to be obtained by the intraspinal method. The earlier the recognition of the disease the better are the prospects of improvement from this method of treatment.

Runge[2] gives a comparison of cases of progressive paralysis treated by the older methods (mercury and iodids) and those treated by salvarsan. He advises the so-called intensive method of treatment and found that the percentage of remissions of the disease increased by this higher dosage. Runge gives salvarsan by repeated courses up to a total dosage of 5 or 10 gm. This plan is to give repeated small doses at five-day intervals, but lately he has extended the time to eight days between doses as a safer plan.

Boggs and Snowden[2] discuss the result obtained in eight cases of cerebrospinal syphilis treated by intrameningeal injections of salvarsanized serum, using the technic of Swift and Ellis, except that they injected undiluted serum in amounts of 25 or 35 c.c. after preliminary intravenous injection of 0.6 gm. of salvarsan. The average single dosage about doubled that of Swift and Ellis. The authors state that their results are better than those of Swift and Ellis, perhaps due to the larger dosage with their method. In all of their cases, the relief from pain was prompt and the improvement in locomotion in some instances amounting almost to restitution to normal. It was noted that more severe reactions followed the injections of the undiluted serum than those reported by Swift and Ellis. The authors believe that the intraspinal method of treatment of syphilis of the central nervous system is a step forward in the therapy of this disease.

Ballance[2] has described a method of introducing salvarsanized serum into the lateral ventricle. He used it in five cases without ill effect; but declares only an experience with a large number of cases would justify a claim of cure of tabes or cerebral syphilis by this means.

Spencer[2] predicts a great future for the intraspinal treatment of cerebrospinal syphilis.

Wilie[1] gives the histories of fifteen cases of syphilis of the central nervous system treated by intradural injections after the method of Ravaut. These cases are reported in detail; the results follow: "Of the 15 cases treated, 2 are dead; 7 cases markedly improved both subjectively and in the objective findings in the cerebrospinal fluid; 3 patients having paresis were given only a single injection and showed no improvement, nor were they made any worse by the treatment; 1 patient showed an improvement after a single injection with a relapse of symptoms and no subsequent treatment was given; 1 patient was markedly improved with respect to the oculomotor palsy but showed progression of the spinal feature of the disease in a progressive paraplegia." The classification of the cases treated is as follows: tabes dorsalis 7; general paresis 3; cerebrospinal syphilis 3; taboparesis 2. Wilie concludes that cases selected for this method of treatment should be selected carefully, and for

the present this form of treatment should be restricted to those cases in which other forms of treatment have proved inefficient.

Pilsbury[1] gives a detailed history of 11 cases of paresis treated with intraspinal injections of salvarsanized serum; the results in his cases are as follows: "Six show improvement in some respect, not necessarily clinical; 1 is no better and 4 are dead." Riggs and Hammes[1] in a report based on 100 injections of salvarsanized serum draw the following conclusions: (1) Clinical improvement and serobiologic reduction usually go hand in hand; (2) the report of cases without their associated laboratory reactions is unscientific and valueless; (3) the intraspinal use of salvarsanized serum, as conceived by Swift and Ellis, is a notable advance in the therapy of syphilitic affections of the central nervous system, furnishing the one avenue of approach for spirillicidal drugs to the otherwise inaccessible spirochetes; (4) it is a safe procedure in the hands of trained and properly equipped men. Whether it will bear the final test of efficiency, namely, cause pleocytosis, globulin excess and a positive Wassermann in the blood serum and spinal fluid permanently to disappear is yet to be demonstrated.

McCaskey[1] has contributed several papers on this subject and has described an apparatus devised for autoserosalvarsan treatment. This apparatus was devised to avoid the possibility of any accidental infection, such as unfortunately occurred in one of his cases. By the use of this apparatus all handling of the serum is done away with, for it is practically a closed method as compared with the former method of treatment of the serum. The blood is collected on the graduated side of a U-shaped tube, which contains a post around which the clot forms, then the serum is made to pass into the opposite stem of the U, when ready for introduction into the spinal canal. Thus the blood is obtained, receives the proper laboratory treatment, and the serum is collected, without leaving the sterile container into which it was originally received. McCaskey says of this apparatus that its "repeated use has failed to show any defect from the points of view of asepsis, simplicity, cheapness or convenience." He has shortened the time of withdrawal of the blood following the introduction of the neosalvarsan to twenty minutes, believing that uniform diffusion of the drug has taken place by this time. McCaskey is enthusiastic over the results of this method of treatment of a "fatal disease, relatively immune against all other procedures."

Fordyce[1] reviews a number of cases of nervous syphilis treated by intraspinal introduction of salvarsanized serum according to the method of Ogilvie.[1] His results were good. Fordyce believes that "each case is a problem in itself and must be approached in an individual manner"; and that no set rule can govern us in the treatment of this type of the disease. He advocates the intensive treatment, when salvarsan is used, and believes it should be combined with mercury. "It is possible in some instances by intravenous method alone to influence the clinical and serologic findings and when this does not take place the only alternative may be intraspinal medication." "Until we are more familiar with the effects of serum fortified in vitro, the Swift and Ellis method of salvarsanizing serum in vivo should be the one of choice." The results obtained with neosalvarsan are so far inferior to those obtained with salvarsan that I have practically given up the use of the former.

Corbus[1] read a paper before the Section on Dermatology at Atlantic City in June, 1914, in which he advocated the intraspinal injections of salvarsan according to the method of Ravaut. Before this paper was published he had very severe reactions in several cases following this method of treatment, and in an addendum to his paper said that in view of this experience he believes the Swift and Ellis technic superior to that of Ravaut, and should be adhered to. "If the Ravaut method is to be used at all the dose should be small and should be dissolved in at least 15 c.c. of spinal fluid."

Byrnes reports a series of thirty-two cases treated with mercurialized serum. Byrnes'[1] clinical results do not seem to the writer to be any better than those reported after the employment of any other method of autoserotherapy. "One advantage of the use of mercurialized serum is that it may be kept in sealed flasks until it is convenient to administer it. No preliminary medication being required, the blood may be collected at any time."

Of great interest and of equally great importance is the work being done recently with autogenous serum in the treatment of various dermatoses. Gottheil,[1] Satenstein,[1] and Fox[1] have each reported good results with this method of treatment, the most brilliant results being obtained in psoriasis. Gottheil and Satenstein say, "Questions as to the theory on which these injections are employed, which are

asked by every patient and by every physician, have to be answered in the main by a confession of ignorance." Fox's experience with this method of treatment is derived from twenty-eight patients suffering with psoriasis. Every variety of the disease was encountered. The eruption varied in the different cases from 2 to 45 years. He states that "the results of the treatment in general were very satisfactory and in some cases decidedly brilliant." Gottheil[1] states "that in chronic furunculosis the results have been extremely encouraging, as in one case of six months' standing there was only one superficial infection after the treatment, and the patient was discharged cured, and that in lichen planus, chronic urticaria and pustular acne, etc., the patients are doing very well indeed, though it is too early as yet to speak of results."

Bruick[3] used physiological salt solution in place of blood serum and obtained good results with this treatment in universal pruritis, erythema multiforme, etc. These results are confirmed by Simon, Rosenthal and Zieler.

Bruckner's[3] method of treating tuberculous peritonitis by injecting nitrogen into the peritoneal cavity is of interest. Bruckner was induced to try this method of treatment by the reported success following the injection of nitrogen into the pleural cavity and the beneficial results following simple laparotomy in tuberculous peritonitis cases, by simply allowing air to enter the cavity. He employed this method in one case, a boy 16 years of age, who had had three laparotomies without benefit. "The first injection followed paracentesis and consisted of 500 c.c. of nitrogen. After nine days a second injection was given of 600 c.c. and after sixteen days a third injection of 800 c.c. At this time it was not necessary to remove any fluid, and in a month ascites was not demonstrable. A fourth injection of 600 c.c. was given two months after the third treatment, as a localized collection of fluid was found. Six months later the patient was pronounced cured."

Raeburn,[3] following Flanden and Toltrain, used subcutaneous injections of emetin hydrochlorid in pulmonary tuberculosis with hemorrhage and reports excellent results. "In addition to controlling the hemorrhage, marked effect was noted on the cough and expectoration." Raeburn does not believe that the drug has any effect on the tubercle bacillus but believes that it is a valuable remedy in reducing congestive conditions in the lungs and therefore it is both a preventive and curative agent in pulmonary tuberculosis.

Numerous papers have appeared during the latter part of 1914 dealing with the results of splenectomy in the treatment of primary splenomegaly of the Banti and Gaucher type, hemolytic icterus and pernicious anemia. Eppinger[3] has had experience with ten cases in which splenectomy was done, viz.: two cases of hemolytic jaundice; two cases of pernicious anemia; three cases of Banti's disease; two cases of cirrhosis of the liver, and in a case of severe catarrhal jaundice threatening transition into icterus gravis. Eppinger concludes that splenectomy is liable to have a curative action whenever there is blood destruction from any cause. His results in the pernicious anemia cases and those of hemolytic jaundice were good. The red cells in one of the pernicious anemia cases increased from 1,160,000 to 4,900,000 in six weeks and the patient gained 8.8 pounds.

Klemperer and Hirschfeld[2] report marked improvement following splenectomy in two cases of pernicious anemia. In a case of Banti's disease in which splenectomy was done by these authors, polycythemia developed in one year following the operation. The red cells increased to eight million, with 120 per cent. hemoglobin. A case of pernicious anemia with the hemoglobin at 15 per cent, showed an increase of hemoglobin in the fifth week following the splenectomy to 50 per cent., with red cells two and a half million, is reported by Huber,[3] and Moss[3] reports equally good results following this operation in a case of pernicious anemia. He considers this treatment applicable only in cases of pernicious anemia with much hemolysis.

Roblee[4] reports in detail two cases of pernicious anemia. Splenectomy was done in both cases with very gratifying results. Roblee says that "the work is too recent to hazard any opinion as to what the ultimate results will be." He feels justified in the following conclusions: (1) Splenectomy in primary pernicious anemia, even in those who are very ill, does not present any very unusual difficulties. The operation, unless a former splenitis has been present with resultant adhesions, does not cause much shock or inconvenience to the patient. There has been no operative mortality in the published cases. (2) The improvement is immediate and striking, and a comfortable temporary lease of life appears to be assured. (3) In view of the variability of the conditions in cases suffering from this disease, we are not

warranted in promising a permanent cure. (4) The immediate results are far more pronounced than is any palliative operation for cancer or other chronic conditions; and if such an operation is ever justifiable, this operation certainly is indicated. This disease heretofore has been such a hopeless one to combat that any method that can be depended upon to give certain early improvement and which holds out a hope for permanent cure is worthy the serious consideration of all medical and surgical practitioners.

Erdman and Morehead[2] in a paper entitled "Splenectomy for Splenomegaly" report the tenth operative and pathologically verified case of splenomegaly of the Gaucher type in which a splenectomy has been done. In point of age their case is the youngest yet reported (female, aged 3½ years). These authors advocate operation for the following reasons: (1) All known forms of therapy hitherto have failed, including Roentgen ray; (2) even in advanced cases splenectomy has resulted in relief of symptoms (weight, pressure, gastric and intestinal distress, malnutrition, etc.); (3) the hemogenetic (or ferrogenetic) function of the spleen apparently is unaffected after splenectomy, as indicated by prompt return of the blood to normal; (4) early recognition of suitable cases should result in a low operative mortality, as the operation per se in this class is not much more hazardous than for other intra-abdominal neoplasms. These authors quote the following statistics: Carstens[2] reports a mortality of 18.5 per cent. in a collection of 739 cases of splenectomy for various lesions; Johnson 27.4 per cent. in a series of 708 collected cases. These statistics indicate an average operative mortality of 23 per cent., which seems abnormally high. W. J. Mayo reports twenty-seven splenectomies for various conditions with two operative deaths, and thinks that the mortality should not exceed 10 per cent.

Moffitt quotes Turk's[2] case in which three months after splenectomy, with blood changes still unmistakably those of pernicious anemia, glossitis and stomatitis were worse than before the operation, but had yielded again to arsenical treatment; and in the discussion of Turk's paper mentions the case cited by Pappenheim,[3] which was operated upon three and one-half weeks before. "The general condition and blood picture are both worse, despite the appearance of many Howell-Jolly bodies and other regenerative signs." Romer's[3] case showed improvement following splenectomy for several weeks, the red cell count reaching 1,500,000, but the improvement was only temporary. Two of DeCostello's[2] cases with initial improvement following splenectomy for pernicious anemia are having a relapse. Moffitt[2] states that "perhaps as Banti and Warthin first suggested and as Eppinger now affirms, there may be some cases of pernicious anemia in which the hemolytic activity of the spleen overshadows other lesions, and perhaps in these splenectomy may as in other hemolytic anemias lead to permanent improvement or even cure. But the proof of this theory is still inconclusive despite the benefit reported from operation. We still feel that the secondary hemolytic organs, liver, lymph glands, and particularly bone marrow, are involved in the disease as well as the spleen."

The treatment of pernicious anemia with thorium X, salvarsan, defibrinated blood, calcium chlorid and cholesterin, have all given some degree of success. Stengel,[3] in reviewing the work on diseases of the blood in *Progressive Medicine*, quotes Vogel and McCurdy's[3] claim that transfusion of physiologically unaltered blood is one of the most promising forms of palliative treatment available in pernicious anemia, and says, "The number of cases on record in which a remission of notable degree and considerable duration has followed immediately on a transfusion is so great as to make it impossible to regard these results merely as coincidences."

Thayer and Snowden[2] recently have contributed a paper on the phenolsulphonephthalein test of renal function. The paper is based on the use of the Rowntree and Geraghty test in a variety of cases from the medical wards of the Johns Hopkins Hospital. In the cases, fifty-four in number, the results were checked by necropsy findings. This is the only paper on this subject in which the results of the test have been studied so accurately. Those papers which have appeared from time to time and in which the reports on the use of this test, and in which the results have varied so greatly, have been based on clinical observations alone for the most part. Thayer and Snowden reach the following conclusions: These observations show, in severe chronic nephritis, a uniformly low phthalein output, which, as a rule, in those instances not interrupted by an acute terminal process, decreases steadily up to the onset of uremia, and is nearly or wholly suppressed from a day or two to a month before death. Acute terminal processes, which may be unsuspected clinically, are common, and here a sud-

den diminution in the elimination of phthalein may come on in cases where the percentage previously excreted is not so low as to appear menacing. In not a single instance, and indeed not once in all the studies of the last five years, have we met with a case of severe chronic nephritis with a good phthalein elimination. Chronic passive congestion (cardiac disease) results often in a considerable reduction in the two hours' elimination of phthalein. The results are very variable in individual cases. In marked decompensation the phthalein output may be reduced to but a trace in two hours; but the excretion, as a rule, is rapidly restored with the reestablishment of circulation compensation. These observations are in agreement with the experimental studies of Rowntree and Fitz.

In the few instances of chronic nephritis of moderate extent which are included among our cases the excretion of phthalein was uniformly considerably reduced. All of these cases, however, were associated with chronic passive congestion of considerable extent, but the percentage of phthalein was lower than might have been expected with an uncomplicated passive congestion. In one instance of acute nephritis, and in one instance of pure amyloid disease the phthalein excretion was greatly reduced. The cloudy swelling observed in acute infections in some instances was associated with considerable reduction in the phthalein output.

These observations, then, tend to support our previous impression that the phenolsulphonephthalein test of Rowntree and Geraghty is a procedure of considerable diagnostic and prognostic value, especially in the study of chronic nephritis.

Shick[1] has devised a test to estimate the natural immunity of persons to diphtheria. This reaction depends on the local irritant action of toxin in the absence of antitoxin, and is performed as follows: "A dilution of diphtheria toxin is made of such strength that 0.1 c.c. contains 1/50 minimum lethal dose for the guinea-pig. This amount is injected intracutaneously on the flexor surface of the forearm. A positive reaction appears in from twenty-four to forty-eight hours, and is characterized by a circumscribed area of redness and slight infiltration, which remains for from seven to ten days. After fading, a brownish pigmented area is left for days and weeks, which in beginning generally shows superficial scaling. According to Shick, a positive reaction indicates that there is less than 1/30 unit of antitoxin in 1 c.c. of blood. The majority have none at all. Such persons Shick considers susceptible to diphtheria.

Von Behring,[3] Schrieber and Zongmuster have reported on the use of a mixture of toxin and antitoxin for producing a lasting immunity to diphtheria suggested by Von Behring. Ruhräh,[5] reviewing infectious diseases in *Progressive Medicine* for 1914, says that "his method will undoubtedly be brought eventually to a condition in which it may be used for purposes of stamping out diphtheria in certain localities." The objection to using injections of the ordinary antitoxin for protecting children is chiefly the short period of time which the immunity lasts, and also the possibility of producing anaphylactic phenomena.

In a large series of cases in which this method of immunizing against diphtheria was used, Parks and Zingher[1] reach the following conclusions: "Those who are exposed definitely to infection should be immunized passively, even if the toxin-antitoxin injections have been given. The use of the Shick test will eliminate the necessity of immunizing about two-thirds. Of those subjected to exposure, as judging from a year's experience, those not reacting are immune. Those found to be naturally immune probably continue immune for a considerable period of time, possibly indefinitely. Active immunization is indicated when there is no immediate danger of infection and when it is desirable to lessen the number of susceptible persons. It is too early to decide whether active immunization should be attempted on a large scale. The lack of sufficient response of at least 50 per cent. of those susceptible to diphtheria and the fact that the immunity lasts for but one or two years, are drawbacks that probably will limit to some degree its usefulness."

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GYNECOLOGY

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In the sweeping progress of modern medicine, volumes are required to chronicle the achievements of those brilliant clinicians and indefatigable laboratory experts who are with almost startling frequency presenting us with the solutions of old problems or the demonstrations of newly discovered facts, any one of which little more than a generation ago might have formed an epoch in medical history.

The year's work in gynecology has been characterized by few startling events, but rather by an even progress marked by certain advances in surgical technic and in certain improvements and additions to our diagnostic methods.

One of the most remarkable achievements of recent times is the ingenious test for pregnancy which was thought out and developed by Abderhalden. During the past year numerous painstaking and competent observers have made many careful and well-guarded tests of the claims put forth for this diagnostic process and it may be said that the results prove beyond a doubt that these claims are well founded.

Of the reports made by local observers, perhaps the most comprehensive series was recently reported by Dr. Jane Ketcham, who in a recent paper before the Indiana State Medical Association tabulates ninety-one carefully studied cases and indicates some very practical conclusions; calling attention to the great delicacy of the test and the necessity of absolute surgical cleanliness in its accomplishment, she shows its applicability and value in cases which present little or no clinical evidence, as in very obese individuals, certain ovarian-tumor cases, an early or precipitate menopause, etc.; a differential diagnosis between a tumor of the ovary, fallopian tube or broad ligament and an ectopic gestation may be accurately made. It appears that a reaction can be had at two months and results subsequently proven to be accurate have been found as early as three weeks. It will disclose a recent abortion, as the reaction is positive for two weeks following the emptying of the uterus. The test should be of great value to gynecologists, obstetricians, and also to the family doctor. The positive reaction does not necessarily involve the diagnosis of pregnancy but if the test result is a negative showing it is to be taken as conclusive proof that no living conception is present.

The far-searching significance of this wonderful diagnostic test need scarcely be mentioned; as a basis for medical or surgical treatment it must have tremendous value, and the medicolegal importance of this test is incalculable.

Perhaps the most formidable of our surviving enemies is cancer; and yet we confidently expect a complete eventual victory over this foe. During the past year much painstaking and brilliant effort has been put forth to determine the true value of radium in this fight against cancer, and with results that appear most inspiring.

Schauta contributes his experiences with radium treatment of uterine cancer in the Vienna gynecological clinic. In summarizing the results of his observations, his first group of cases are not to be considered as they were treated in the experimental stage with exaggerated intensity and duration of the radiations. Since then a series of twenty-two cases have

been carefully observed; eleven cases, that is 50 per cent., achieved primary cures. Whether these cases shall establish themselves as permanent cures can be determined only by the lapse of sufficient time—a number of years. Meanwhile it seems to be a very noteworthy result that 50 per cent. primary cures could be obtained in practically without exception inoperable and hopeless cases. It is very significant that of his first experimental group of very advanced cases, thirteen in number, carcinoma was demonstrable in only two at the site of radiation and in the immediate surroundings after the termination of the treatment. Schauta believes that operable cases should still be subjected to surgery and that in such cases radiation should be the after-treatment. In this connection Henkel calls special attention to cancer-remnants which are left behind after vaginal extirpation; these must be carefully radiated with the radio-active substances or with very large doses of Roentgen rays. He urges great care in radiation, as too much will be destructive of non-cancerous tissue and too little may stimulate the growth of carcinoma.

Uhle emphasizes that the reports of clinical cures possess undetermined value and that years must elapse before a definite verdict can be rendered as to the actual value of radiotherapy in carcinoma of the uterus. At the present state of our knowledge we do not recognize radium and mesothorium as universal remedies for uterine cancer, although their importance must not be underestimated as useful adjuncts in the fight against inoperable carcinoma of the uterus.

Menge reports some exceedingly interesting demonstrations of conditions found in patients with uterine carcinomata which had been treated with mesothorium and radium. In two cases the new growths, which had been present in part in the cervix and in part in the body of the uterus, had undergone disintegration and substitution by cicatricial tissue. The clinical symptoms of carcinoma, such as hemorrhages, suppuration, and pain, subsided very promptly. The general condition, the hemoglobin contents and the body-weight were improved materially. In one uterus, which had been extirpated after the completion of the radiation treatment (a cervical cancer with involvement of the corpus uteri), only a few narrow strips of sclerotic tissue were left behind in which no cancer cells of viable appearance were demonstrable. On the basis of his favorable observations Menge is of the opinion that one should treat all cases of cancer by this method and not restrict its use to the inoperable cases only.

Benson is very optimistic and asserts that in carcinoma of the uterus an improvement can always be obtained in the inoperable cases by means of radiotherapy while a cure is held to be certain in the operable cases. As to the permanency of the cures, sufficient time has not yet elapsed in which to formulate a final judgment.

The experiences of Köhler, Kelly, Janeway and others all agree in the main proposition that we have in the radium treatment of uterine carcinoma a most valuable weapon of attack.

Abbe, who has gone deeply into the subject, warns against excessive optimism especially in the advanced cases. He believes that much is to be hoped for in the radium treatment of cancer but holds that the experimental stage has by no means been passed, and this conservative view appears most reasonable to the experienced mind.

This delicate, painstaking and unusual treatment can be properly conducted by the comparatively few and it is to them and their final analysis of the results that we must look in building our judgment as to the efficiency of this remarkable agent.

The Roentgen-ray treatment of fibroid tumors of the uterus has received a great deal of attention during the past year and the results claimed are of a quality to merit our careful consideration. In some German clinics this method of treatment of uterine fibroids has to a considerable degree displaced surgery, although the cases seem to have been selected with much discrimination.

Freund apparently limits this treatment to those uncomplicated fibroid tumors found at or near the menopause. All authors seem to agree that the complicated cases, the submucous cases and the pedunculated variety should not be treated with the Roentgen ray.

Straussmann pointedly states that the recommendation of Roentgen-ray treatment in myoma cases involves grave responsibility. He suggests that in women past the climacteric fibroids may be combined with all sorts of conditions. Marked necrotic changes and pyosalpinx even in aged women and cystic and malignant tumors of the ovary are not of uncommon occurrence and are to be regarded as definite contra-indication for Roentgen-ray treatment.

Henkel urges caution in the use of this treatment and calls attention to the fact that intestinal disturbances frequently develop in the course of the treatment, also aggravation of the bleeding and impairment of the general health and sometimes fever. Roentgen-ray treatment exerts primarily a deleterious effect upon the ovaries, resulting in sterility, and should not be employed in individuals during the child-bearing years of life.

It seems clear that under certain conditions fibroid tumors are greatly reduced in size by the use of the Roentgen-ray treatment, and in many cases hemorrhage is completely stopped. However, it is apparent that great harm results from the use of the agent in complicated cases. It is also conceded that great difficulties are frequently encountered in diagnosing suitable cases for this treatment. Therefore it seems a very evident duty to advise against the Roentgen-ray treatment of fibroid tumors in all cases in which the diagnosis of the exact condition is not absolutely certain, and in accordance with the rule it is evident that we must continue as heretofore to treat the greatest majority of fibroid tumors by surgical methods.

GENERAL SURGERY

NOT INCLUDING ABDOMINAL AND GENITO-URINARY

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FORT WAYNE, IND.

No one human mind could in a short time digest all the year's surgical literature. No two men could agree as to which of the articles that appeared during 1914 were the most deserving of review. This review is quite naturally very largely compiled from papers that had a personal interest for the reviewer.

Nothing really new was developed in the field of asepsis and antisepsis. That a sufficient hand disinfection can be obtained by first washing with hot water and soap and then with 70 per cent. alcohol has been confirmed in a report from Koch's Institute by Huntemüller and Eckard (Berl. klin. Wchnschr., 32). They advise the use of a castor oil soap and spirit that contains 70 per cent. alcohol. H. Billet (Gaz. d. hôp.) maintains that sterile hands and arms may be obtained by simply washing them for five minutes, without the preliminary use of soap and water, in 90 per cent. alcohol that contains 5 c.c. of tincture of iodin to the liter. Rechard (Frank. Zeit., 30) advises for hand disinfection, especially for war surgery, the rubbing of the hands and arms with a mixture containing Balsam of Peru, 4.0 Ol. Ricini and Turpentine 2.0, glycerin 1.0 and Spts. vin. cinc. 100. Mastisol, which was introduced as a wound dressing by von Oettingen, is now extensively employed in many ways; Dietsch (Zentralbl. f. Chir., 1) paints the site of operation with mastisol and then covers with sterile gauze and incises through the gauze while Jaquet prepares his hands for operation by coating them with mastisol and then drawing on sterile cotton gloves. G. Zanetti (Abstr. Zentralbl. f. Chir., 44) advocates replacing the ordinary tincture of iodin for skin disinfection by a 9.75 per cent. of iodin in benzol; the benzol solution is permanent and consequently it lacks the irritative action of the ordinary tincture; it is also more penetrating and is equal in antiseptic properties. According to Magnus, König's Marburg Clinic has been employing with satisfactory results a 3 per cent. solution of thymol instead of tincture of iodin.

For infections of the knee-joint (streptococcic and gonococcic), tendon-sheath infections, etc., Felix Pohl and Schille (Zentralbl. f. Chir., 43) advise injecting into the infected cavity a mixture consisting of 30 parts each of alcohol and carbolic acid and 10 parts of camphor.

The astonishing results which were reported by Heermann of Kiel in the summer of 1913 in the treatment of tubercular and other chronic infections with mesbé (the extract of a Central American plant), have been partly confirmed by Chulmsky (Zentralbl. f. Chir.), but Vulpius (Zentralbl. f. Chir.) after a liberal trial could detect no therapeutic benefits.

A number of interesting and important studies enriched the literature of both general and local anesthesia. Some time ago, Delbet, von Harnowski and others showed that inhalation anesthetics have a direct action on the adrenal glands. Since these organs are rich in lipoid substances, some such action was, *a priori,* to be expected. Now Oliva (Lyon Chirurg., Trans. XI) shows that chloroform not only decreases the adrenalin content of the body to a much greater extent than does ether but that the action is much more prolonged. The experiments cited by Oliva prove that chloroform has a pronounced toxic action on the adrenals themselves. One of the functions of the adrenals is to regulate the tonus of the sympathetic system and consequently a de-

crease of adrenalin tends to produce shock. It is of interest to note this toxic action of the chloroform is not so pronounced after the administration of morphin.

The influence of diet on the toxicity of chloroform and hepatic necrosis has been studied by Opie and Alford (Jour. A. M. A., lxii, 12). After the administration of like amounts of chloroform the experimental animals which were fed on carbohydrates lived while those fed on meats and particularly fats died.

The prophylaxis of postanesthetic vomiting was considered by Buckler at the meeting of the American Association of Anesthetists. Acting on the theory that the vomiting is largely the result of an acidosis, the essayist gives the patient sodium bicarbonate 1 dr. and lactose 1 dr. every four hours for forty-eight hours before operation, and after operation 250 to 300 c.c. of a 5 per cent. sugar solution by the Murphy drop as well as frequent sips of a 2 per cent. soda solution. The results of this procedure are labeled "good."

Crile (Am. Jour. Surg., Oct.) discussed the influence of anesthetics on acidosis. In patients in whom an acidosis is threatened or present, he advises the preoperative administration of sodium bicarbonate, glucose and bromids per rectum, and the use of ether twilight or light nitrous oxid anesthesia.

Henderson (Surg., Gynec. and Obst., Sept.), in a review of some of the recent experimental work defining the dangers of anesthesia, directed attention to Levy's work, which shows that primary heart failure under chloroform occurs during light anesthesia from a condition of fibrillation of the ventricles—a delirium cordis. Ether deaths also occur in incomplete anesthesia or during the stage of excitation, very few die from too much anesthetic. It is safer to give ether vapor, according to Henderson, than it is the liquid ether, and it is advisable to give carbon dioxid in the inspired air after anesthesia to stimulate respiration to a more rapid elimination of the ether. (Certainly the weight of evidence is against the practice of operating in critical cases under a "light anesthesia."—REV.)

Meltzer (Berl. klin. Wchnschr., 15) justly claims that the value of the intratracheal insufflation method has been proved beyond all doubt. He finds that its greatest field is in intrathoracic surgery, but it is also a method of choice in conditions accompanied by frequent vomiting and in operations in the neighborhood of the medulla, where sudden paralysis might occur. In an article in *The Journal A. M. A.* (May) Meltzer insists that the tube should be introduced into the trachea until it meets an obstruction and should then be withdrawn about an inch. Tuffier (Bull. et mém. Soc. de chir. de Paris) states that while there is no question as to the value of the method in intrathoracic surgery, the difficulty of passing a soft tube into the trachea of an anesthetized patient is against its general employment.

Gwathney (Am. Jour. Surg., July) discusses the advantages of his method of oil-ether rectal anesthesia as shown in 500 cases, while Luke (New York Med. Jour., May 9) condemns the method.

Barton Cook Hirst (Am. Jour. Obst., April), on the basis of the results in a thousand of his own cases, stamps Crile's method of combined local and general anesthesia as useless.

Kümmel, the distinguished Hamburg surgeon (Surg., Gynec. and Obst., Sept.), holds that intravenous ether anesthesia combined with 1 to 1½ per cent. solution of isopral is the ideal anesthetic for many cases.

Kleinschmidt (Berl. klin. Wchnschr., 5), after a clinical study of the results with rectal isopral narcosis concludes that although in a great number of cases it gave an ideal narcosis the occurrence of postnarcotic excitement and the toxic dangers of the large doses at times needed prevent a recommendation for general employment.

Beresnegowsky (v. Langenbeck's Arch.), in common with most writers, condemns intravenous hedonal anesthesia as dangerous; it causes a pronounced fall in blood pressure and there is a likelihood of thrombotic disturbance. (Despite the failures of hedonal and isopral it is safe to predict that some similar narcotic will soon find a very wide use in surgery.)

The sphere of local anesthesia has been greatly extended, due largely to a wide-spread employment of paravertebral anesthesia. The limits of local anesthesia as used in Dollinger's clinic at Buda Pesth were outlined by Holzworth before the German Surgical Congress. In every case they attempt to operate with local, and only in the event of failure do they turn to general anesthesia. In 1,145 major operations they had but 5 per cent. of general anesthesias and 16 per cent. of these were in abdominal cases. The systematic use of paravertebral anesthesia, according to the technic of Finsterer and Kappis, has increased the successes in abdominal cases, but they had one case of collapse, with recovery, due to too large a dose of novocain.

The technic of paravertebral anesthesia as employed in Payr's clinic at Leipsic, especially for gall-bladder work, is described by Jurasz (Zentralbl. f. Chir., 35). By this method 5 c.c. of the 1 per cent. novocain solution are injected into the region of each foramen from the sixth thoracic to the first lumbar; it is important that the injections should be made near the intervertebral foramen because at the spinal ganglion the ramus communicans goes to the splanchnic. Fölken (Deutsch. med. Wchnschr., 4) states that in Braun's clinic all operations in the territory of the sacral plexus, including prostatectomies and obstetrical operations, are performed under parasacral anesthesia.

Hesse (Abstr. Zentralbl. f. Chir.), after a large experience with Külenkampff's brachial plexus anesthesia, advises its employment by the country practitioner. Härtel and Keppler (v. Langenbeck's Arch., B. C. III, Hft. 1), however, hold that the method is not without its dangers and that it is contra-indicated when simpler procedures will work, as well as in patients with chronic intoxications (lead, arsenic and alcohol) or lung affections, and it should never be used on both sides.

The addition of potassium sulphate to local anesthetics after the method of Kochmann and Hoffman, according to the latter (German Surgical Cong.), increases the anesthetic potency of novocain 85 per cent., of cocain 75 per cent., and of tropocain 50 per cent.

Probably the most important feature of the cancer question during 1914 was the discussion of the treatment with radio-active substances and the Roentgen rays. Krönig, Gauss, Krinski, Lembcke, Wätyen, and Konigsberger (Deutsch. med. Wchnschr., 15 and 16) give the present position of the Freiburg school on this topic. They prefer radio-active substances particularly mesothorium to the Roentgen ray, because of greater penetrability. The radium or mesothorium should be kept at least 5 cm. from the skin. They maintain that it is possible to cause the disappearance of a carcinoma without tissue injury, the results have now lasted two years. In cases of difficult operability they decide in favor of mesothorium and Roentgen rays. Even in readily operable cases when the tumor is accessible to "cross-fire" they give the preference to the "strahlen" therapy. In a discussion on this subject before the German Surgical Congress, von Eiselsberg, the Vienna surgeon, insisted that the knife should be used in all operable cases of cancer. He is skeptical regarding the prophylactic treatment of operated cases, and believes that the action of the radium, Roentgen ray, etc., is purely local and not specific for tumor tissues. Sgalitzer maintained that the Roentgen therapy has increased the indications for operations because he holds that one should remove an inoperable tumor as widely as is technically possible and then follow with an intense Roentgen treatment.

Ernest Bumm (Berl. klin. Wchnschr., 5) prefers the Roentgen ray to radium and mesothorium and holds that there is nothing else in medicine that can be compared to this wonderful action of the Roentgen ray in the treatment of cancer. While we can probably agree with Bumm that the future in cancer therapy belongs to "Bestrahlung" there is certainly not enough evidence to justify the position held by some authors that we should consider abandoning the knife in the treatment of malignant disease.

The action of chemical agents (eosin-selen) which have a destructive action on mice tumors have not yet succeeded in the human subject, according to D. von Hansemann (Ztschr. f. Krebsforsch., Bd. xiv, 1).

The Coly's toxin treatment of sarcomata of long bones was discussed by the originator (Ann. Surg., Nov.). His statistics of cures and improvements in 124 cases are certainly remarkably good; however, in a discussion of this subject at the American Surgical Congress, it was the consensus of opinion that in only a very small portion of the cases (less than 1 per cent.) were the toxins observed to be of any use.

The application of the Abderhalden and other biological tests for the diagnosis of cancer received much attention, but the results were not at all uniform. Fränkel (Deutsch. med. Wchnschr., 12) reports that in the Heidelberg Cancer Institute the Abderhalden test has not given useful results and Fasiani (Wien. klin. Wchnschr., 11) found the test positive in 96 per cent. of the cancer cases, but also obtained positive reactions in 65 per cent. of carcinoma-free subjects.

The flood of publications regarding the results obtained by treating surgical tuberculosis with heliotherapy abated to a very marked degree—due, no doubt, to the practical unanimity with which this procedure has been accepted. Max Jerusalem (Wien. klin. Rundschau, 28, 16) shows the splendid results obtained in the lowlands of Austria with heliotherapy. Arnd

(Korresp. f. Schw. Arzte, 25) and Vulliet (Rev. Swiss de med., 15) emphasize that heliotherapy can be practiced at low altitudes. The latter writer admits that in adults, on sociological grounds, operative procedures must be considered, but holds that children should always be treated conservatively. Kirsch and Graetz (v. Langenbeck's Arch., civ, 2) prove that Rollier's methods heal tubercular fistulae in an extraordinary manner.

Barsch (München. med. Wchnschr., 29) records the employment in the Heidelburg clinic of enzytol (boric acid-cholin), of which 4 c.c. of a 10 per cent. solution are given intravenously in combination with Roentgen therapy; in the twenty-six reported cases of surgical tuberculosis, the results were unusually good. Huntington (Ann. Surg., 6) is an advocate of early operations in tuberculosis of bones uncomplicated by joint lesions.

The newly awakened dispute as to the presence of tubercle bacilli in the blood of patients with surgical tuberculosis aroused some interest. Hass (Brun's Beiträge, xc, 1) could not find the bacilli in a single case. Moewes and Rautenberg (Deutsch. med. Wchnschr., 10) hold that the presence of bacilli in the blood can not be demonstrated.

Friedmann's "serum" received its death knell. Vulpius (Deutsch. med. Wchnschr., 10) had one death from its employment and no improvements. Five authors (Deutsch. med. Wchnschr., 17) agree that very uncertain results were obtained and one worker found an ampulla contaminated with staphylococci.

The subject of tissue and organ transplantation was considered at the meeting of the International Surgical Congress in a series of papers by Morestein (Paris), Villieard (Lyon), Ullmann (Wien), Lexar (Jena), and Carrell (New York). It was the practically unanimous opinion that while the technical side of organ transplantation has been solved it can not be employed in human surgery. Bone is the only tissue that can be employed in heteroplastic transplantations and it is replaced by the tissues of the receptor. Lexar stated that histological evidence showing proof of healing even in homoplastic and heteroplastic skin grafting is lacking, and he regards the usefulness of homoplasty as extremely doubtful. Carrell claims that the transplantation of medium-sized arteries gives good results in 95 per cent. of the cases.

Rehn (München. med. Wchnschr., 3) describes results from his procedure of using strips of the skin, freed of its epithelial layer, together with subcutaneous connective tissue and small amount of fat for closing in tendon defects. In several instances this procedure succeeded after the failure of fascia and tendon transplantations.

Lewis and Davis (Jour. A. M. A., lxii, 8) have found, contrary to Knoew's findings, that fascia transplanted into tendon defects is not changed into tendon substance but the fascia plays a passive rôle and fresh tendon grows from the stumps.

Heineke (Zentralbl. f. Chir., 11) has demonstrated by experiments on dogs that it is possible to restore function to a paralyzed muscle by direct implantations of a nerve into the muscle substance.

Fieschi (Abstr. Zentralbl. f. Chir., 47) has employed a sponge-like rubber which he calls "new flesh" as a supporting frame-work in hernias and in a case of abdominal aneurysm. He finds that the rubber will "heal in" with the tissues.

The question of bone development received more than its just share of attention. Most workers disagreed with McEwen's teaching that periosteum has no power to regenerate bone. Mayer and Wehner (v. Langenbeck's Arch., ciii, 3) found that bone regeneration depends largely on the so-called cambium layer of the periosteum. Williams (Ann. Surg., 4) teaches that only very small pieces of bone should be transplanted without periosteum. McWilliams (Surg., Gynec. and Obst., Feb.) holds that periosteum can regenerate bone and all bone grafts should be transplanted with as much periosteum as is possible. Phemister in a very thorough "arbeit" (Surg., Gynec. and Obst., Sept.) gave some very interesting findings. He believes that periosteum does form bone and that a bone transplant placed in a useful location, i. e., a bony defect, undergoes progressive changes, while one placed in a useless location, i. e., soft parts undergoes chiefly regressive changes and is gradually removed.

Of all the numerous articles that appeared on the surgical employment of bone grafts, that by Albee (Surg., Gynec. and Obst., June) is probably the most valuable. Albee's paper is based upon an experience of 253 human bone graft cases and numerous animal experiments. In his last 100 cases, in which he has employed the bone graft with its enveloping membranes (periosteum-endosteum) and contacted with bone, his successes have been 100 per cent.

In the opinion of Sherman and Tait (Surg., Gynec. and Obst., Aug.) the transarticular method is the procedure of choice in operating upon certain joint fractures; intra-articular screws and plates have decided mechanical advantages and are *per se* innocuous.

There is an increasing amount of attention given each year to the subject of internal derangements of the knee. An article by Robt. Jones of Liverpool (Surg., Gynec. and Obst., Oct.) deserves particular attention. The author states that he has explored the knee-joint in search of internal derangements on considerably over 1,000 occasions. Jones does not operate on any case seen at once after a first displacement; he does not encourage operation with a recurrent painless trouble that is not followed by effusion. He advocates operations where an athletic life is followed as a means of livelihood: operation is a positive necessity for men who work or stand in positions where a yielding knee may mean disaster.

Spencer-Mort (Brit. Med. Jour., Jan. 17) warns that in elderly people, even with a history of trauma, one should not be in a hurry to diagnose internal derangements of the knee-joint, as the symptoms are frequently the result of a beginning of chronic inflammation.

Ernst Jeger and Jul. Wohlgemuth (Abstr. Zentralbl. f. Chir., 33) recommend for cases of parenchymatous bleeding, in which ligature is impossible, the use of an "absorbable tampon," which is a mass obtained by cutting up animal membranes into very fine particles.

Philipowicz (Abstr. Zentralbl. f. Chir., 33) studied the use of muscle, fat, fascia and omentum to stop bleeding from parenchymatous organs and believes there is no essential difference in their hemostatic powers—one should use whichever is handiest.

Jugé and Mortroud (Arch. prov. de Chin., 2) ligated the femoral vein with no apparent injurious results; this led to a discussion of the treatment of wounds of great veins in which Delamglade, Brignole, Pieri and Jourdan agreed that ligation is preferable for the femoratis, axillaris and jugularis, as suture leads to thrombosis and there is no injury from ligating. Suture comes into question only for the venae portae and the vena cava above the renals.

Halstead (Jour. A. M. A., liii, 3) demonstrates the value of partially occluding an artery with an aluminum band for some time before extirpating an aneurysm.

Kümmel (Surg., Gynec. and Obst., Aug.) describes an operation in which he laid bare the aorta, retropleurally and retroperitoneally, and after compressing it he removed the sack of a ruptured aneurysm and closed the aorta by suture. The patient died but Kümmel believes the procedure should be practiced in the future.

Bloodgood (Surg., Gynec. and Obst., April) presents the results of his studies of 200 cases of cancer of the lower lip. Healing for five years occurred after simple excision in 65 per cent., and in 95 per cent. with excision and complete extirpation of regional glands. If one operated in the primary stage healing could be obtained in 99 per cent. In another (Canadian Jour. of Med. and Surg., Sept.) study based upon 100 cases of cancer of the tongue he came to some remarkable conclusions. If operated upon very early it is sufficient to remove the growth with a good margin of healthy tissue. In such cases there are about 100 per cent. of recoveries (!) The high mortality after the operation is chiefly due to the removal of the floor of the mouth without at the same time removing a section of the lower jaw.

Mauclaire (Arch. gén. de chir., 3) indicates the need of the plastic closure of all skull defects and advises taking bone and periosteum grafts from the crest of the ilium, as these grafts can be bent into the same shape as the convexity of the skull.

Schiller (Wien. klin. Wchnschr., 32) has been able to stop hemorrhages from bone wounds during skull operations by using powdered cement mixed with blood.

Fritz Härtel (Deutsch. Ztschr. f. Chir., cxxvi) has employed his method of injecting alcohol through the foramen ovale into the Gasserian ganglion in 24 patients, with 17 perfect recoveries, 2 apparent relapses and 5 actual relapses. One should first inject ¼ to ½ c.c. of a 2 per cent. solution of novocain to be sure that the ganglion has been reached, then inject 1 c.c. of 70 to 80 per cent. alcohol drop by drop.

L. M. Pussep (Abstr. Zentralbl. f. Chir.) has followed Horsley's suggestion and treated with good results some persistent syphilitic affections of the central nervous system by trephining and submeningeal injections of a 1:2,000 bichlorid of mercury solution.

Axhausen (Ergebnisse der Chir. u. Otho., Bd. vii) advocates a wider employment of brain puncture, according to the technic of Neisser-Pollack, for both diagnostic and therapeutic purposes.

A large number of investigators write concerning the interesting relationship between the

thymus gland and Graves' disease. Klose, father of the statement, "without thymus disorders no Basedow's disease," restated his position (Berl. klin. Wchnschr., 1). He divides patients with Graves' disease into three classes: In the first the thyroid is chiefly involved; in the second, the thymus and thyroid are both specifically diseased, and in the third, the thymus is chiefly involved.

In Rehn's Frankfort Clinic in every severe case of Basedow's disease both the thyroid and thymus are extirpated. The removal of the thymus does not increase the mortality as in the last 200 Basedow operations there were no deaths (!)

Felix Rose (Semaine méd., 3) and von Haberer (German Surg. Cong.) recognize this thymus-Basedow relationship but do not accept the wide views of Klose. A. Kocher (German Surg. Cong.) proclaims that operations on the thyroid often cause a decrease in the size of an enlarged thymus. In 5,740 strumectomies in the Kocher clinic they did not have one "thymus death." He sees the occurrence of an enlarged thymus often before and without symptoms of Basedow's disease and holds that it can not be a cause. In rare instances as in a young person with an enlarged thymus, do they consider operating upon the thymus as well as the thyroid.

If careful attention is given to the details of the technic of intrathoracic operations, Alexis Carrell (Surg., Gynec. and Obst., Aug.) believes that they will become as safe as intra-abdominal operations. He describes the details of walling off the operative field with towels of black and white Japanese silk and thus protecting the pleural cavity from atmospheric germs as well as from the irritation and infection caused by handling; moreover, when hemorrhage occurs, blood is prevented from flowing into other parts of the thoracic cavity. In heart operations, the complication of air embolism can be avoided by aspirating the air contained in the heart, after suture of the wall but before the forceps at the pedicle are removed.

The newest field of surgery is found in the operative work on the orifices of the heart. There is no doubt but that the surgeon is now able to convert a stenosis with its relatively bad prognosis into an insufficiency with its relatively good prognosis.

Carrell (Ann. Surg., July) relates the story of successful experimental work on lower animals. He opened the aorta and cauterized the semilunar valves, incised and sutured the pulmonary valves and patched openings in the pulmonary artery with transplants from the vena cava. Pieri (Abstr. Zentralbl. f. Chir., 42) reviewed the whole subject and showed how a stenosis may be dilated sharply or bluntly from a small opening in the vessel or ventricular wall (valvulotomia interna) or it may be incised directly from without (valvulotomia externa). The operator must remember that there are zones which if injured cause immediate stoppage of the heart; these are: (1) the septum of the auricles and ventricles, (2) the sulcus longitudinalis anterior on the border of upper and mid-thirds and (3) the neighborhood of the openings of vena cava.

Doyen reported to the French Surgical Congress in October, 1913, that he had incised the pulmonary valves for a congenital stenosis in a young girl, but death occurred soon afterward.

Tuffier (Presse méd., March) dilated an aortic stenosis with his finger, which he introduced through an opening in the wall of the ventricle, and he claims that improvement resulted.

Jurasz (München. med. Wchnschr., 33), in a case of gunshot wound of the heart, after failure of attempts at suturing, cut a small piece of muscle from the chest wall and fastened it over the heart wound with immediate cessation of bleeding.

The bronchial stump after the extirpation of a lobe of the lung can best be closed, according to Henschen (Brun's Beiträge) and Giertz (Zentralbl. f. Chir., 36) by covering it with a free graft of fascia lata. Munnich (Deutsch. Ztschr. f. Chir., cxxvi) has also closed tracheal defects in the same manner.

The attempts to transfer pulmonary tuberculosis to the list of surgical diseases continued. The indications for rib resections and other major surgical procedures, according to Fredrich (German Surg. Cong.), are the same as those for artificial pneumothorax, when, on account of adhesions, the creation of a pneumothorax is impossible. Fredrich is, of course, an advocate of extensive rib-resections; he is skeptical regarding the possibilities of an extrapleural plug of fat or paraffin and has seen failures from phrenectomies because of adhesions at the base of the lung. Sauerbruch and Wilms (German Surg. Cong.) see the indications for operation in "one-sided lesions with cavity formation (by "one-sided" is understood an absence of progressive or fresh tuber-

culosis in the opposite side); the so-called fibrous forms with a tendency to shrinking offer particularly good chances for recovery after operations.

In most cases Wilms practices his operation of rib-resections. He regards phrenectomy as of minor importance; when the upper lobe is alone involved he recommends Tuffier's procedure (an extrapleural plug of fat).

Sauerbruch (Brun's Beiträge) does not agree with Bär and others, who consider an extrapleural plugging as a complete substitute for the thoracoplastic operations. Cavities can be completely collapsed by doing an extrapleural pneumolysia and making pressure with a filling of paraffin.

Franz Torek (Surg., Gynec. and Obst., July) describes what he calls an intrapleural pneumolysia, which consists in introducing the hand into the pleural cavity, breaking up all adhesions and allowing the lung to collapse.

The Swedish surgeons, Jacobaeus and Lindstrom (Abstr. Zentralbl. f. Chir., 47) have succeeded in rendering cases amenable to the pneumothorax treatment by destroying the adhesions. With the help of a thoroscope they introduced a galvanocautery through a thin cannula and were able to burn the string and band-like adhesions. Jacobson attempted to accomplish the same thing with the aid of a Roentgen-ray screen.

The successful intrathoracic resections of the esophagus of Torek and Zaaiger helped to brighten one of the saddest of all the domains of surgery. There are, however, many problems concerning this procedure which remain unsettled. Dreger (Zentralbl. f. Chir., 28) considers the question as to whether the esophagus can be better reached by an opening to the right or left of the vertebral column and concludes that nine-tenths of the thoracic esophagus can be best reached from the right side. Meyer (Jour. A. M. A., lxii, 2), in considering esophagoplasty, shows that at present the Jianu extrathoracic operation is the method of choice, although the intrathoracic procedure appears to be more ideal. Frund (Brun's Beiträge) has performed experiments that show that the stumps of the resected esophagus can be safely united by a circular suture if at a previous operation pieces of fascia are grafted onto the esophagus at the points to be united.

Judd (Surg., Gynec. and Obst., March) discusses the end-results of operations for cancer of the breast in the Mayo clinic and concludes that the operations for mammary cancer give the best results of all cancer operations. Of 130 patients, 32.5 per cent. were alive after ten years without recurrence (!) Of 510 patients 44.7 per cent. are alive after three years.

Lindenberg (Deutsch. Ztschr. f. Chir., cxxviii) relates that in the Rostock clinic even advanced cases of mammary cancer are offered the chances of an operation, and the statistics show 32 per cent. living after three years and 28 per cent. after five years without recurrences.

It will be noted even from this very incomplete résumé, that in spite of the almost complete cessation of scientific work in Europe surgery has made some progress.

BACTERIOLOGY AND PATHOLOGY

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During the past year many contributions of value have been added to the already existing knowledge of bacteriology and pathology. Owing to the fact that there is such a close relationship of these important subjects they will be considered together.

It must be borne in mind that in not a few instances some things have been disproved that have been considered completed in the past. It is well that these supposedly solved problems have not been able to stand the test of science, and that they have a consideration in this review.

While bacteria in general have been considered to belong to the plant family, there is still some uncertainty about this classification, and there is enough uncertainty about the same to excite a great deal of interest in trying to prove or disprove what has already been said concerning such a classification. It is known that the animal has comparatively little power of synthesis, and that plants have the power of converting simple elements into complex compounds; or, in other words, that they are able to build new products. Bacteria have this power to their credit, although in a somewhat limited degree. This work has been emphasized by Abderhalden, Osborne, Mendel, Tamura and others. Tamura has been able to grow bacteria in solutions entirely devoid of organic substances, and found that after so doing analysis showed nitrogenous phosphatids, purin bases and protein in abundance.

Thiele and Embleton by experiment maintain that the capacity of an organism to pro-

duce disease depends on the amount of toxic protein-cleavage products which may be formed by the action of antibodies on the bacterial protoplasm. They distinguish the bacteria in the following groups:

"In group one the human body produces very little antibody, as a result of which the bodies of the bacteria are slowly broken down into simple products, and hence these organisms are practically non-pathogenic. In group two are placed the organisms against which the body produces antibodies in moderate quantities. The bacteria are acted on by the antibodies or ferments, and are split into simpler compounds. This process is so gradual that the protein-cleavage products, not being immediately broken down beyond the toxic stage, accumulate in the system, producing toxic symptoms. This group contains most of the pathogenic organisms. In group three are those bacteria in which the antibody activity is very high. If these organisms succeed in growing within the body the protein substances are so rapidly broken down that they are soon split beyond the toxic stage, no toxic products accumulate, and no symptoms are produced. These organisms are ordinarily non-pathogenic."

It was interesting to note that these experimenters were able to make organisms of the first group become pathogenic by raising the antibody activity against them. This was accomplished by injecting dead organisms into animals (guinea-pigs) and waiting from five to fifteen days, during which period the animals were inoculated by the live organisms, and death of the animals resulted. Control animals which did not receive the preliminary dose of dead organisms were not affected when injected by live organisms. Death followed immediately with characteristic symptoms, and post-mortem findings of anaphylaxis resulted in the other cases. In the group in which the organisms were non-pathogenic, on account of the antibody, activity against them was increased. In these cases the presence of toxic substances in the blood was shown by injecting it into the veins of normal animals. Hypertonic saline solution decreases antibody activity formation. This was used, and death of the animal followed.

Their conclusion from these experiments led them to believe that the pathogenicity of bacteria depends on the activity of the antibodies or ferments in the system of the host. If such activity is either very slight or very high, the organism is non-pathogenic. Either by increasing or decreasing antibody activity in the respective cases these bacteria would become pathogenic. Furthermore, these observers found that many times organisms on becoming pathogenic developed a capsule. This new environment to which the organism is subjected is attributed as the cause. A hostile environment spells virulence. The capsule formation is explained as follows: A ferment coming in contact with an albuminous substance which it can attach will gradually penetrate it. If, however, the bacterium develops the faculty of surrounding itself with a zone of such material and of renewing it by fresh extrusion from its own cytoplasm as rapidly as it is dissolved by ferment activity, the bacteria lives on unaffected. Virulence is then frequently an induced process, associated with the production of a capsule, from which the toxic protein-cleavage products can be liberated by ferments, which furnishes at the same time a barrier against phagocytosis. Hess is led to believe by his experiments that virulence plays an important rôle in bacteremia, and that the bacterium may not be filtered from the blood by the tissues like inert foreign bodies. He used an avirulent and a virulent strain of tubercle bacilli for rabbits. The avirulent bacilli were taken up shortly in the main from the blood, while the virulent strain remained in the blood for several hours. However, there was a period in which the blood was free from the virulent bacilli. When systemic tuberculosis became manifested there was a reinvasion of the bloodstream. There were exceptions in the experiments, but in the main the above was true.

Recent studies by Embleton, Thiele and Rosenow have made decided advances in their experiments with various bacteria. It has been known for some time that bacteria under varying conditions would become changed morphologically. Their identity in the main has been preserved. These men have carried their experiments to such an extent that they have been able to completely change the characteristics of the bacteria under observation until it would be impossible to recognize the original species of the bacterium. For instance, it has been possible to change the non-pathogenic to the pathogenic, a motile to a non-motile, or *vice versa,* and a non-capsulated to a capsulated; and an organism which was accustomed to the temperature of the soil was changed so that it would thrive at body temperature, or even higher, giving characteristics of the *Bacillus anthracis.* Likewise, the smegma bacillus,

under varying conditions, was made to produce lesions similar to the tubercle bacillus, and seemed to be as pathogenic as the tubercle. Rosenow, in studies with the pneumococcus, *Streptococcus viridans, S. hemolyticus, S. mucosis, S. rheumaticus* under different environments, has with these organisms demonstrated how bacteria can be changed to produce similar and dissimilar pathological conditions. This proves that transformation of bacteria can be accomplished with comparative ease. Also this transformation can be accomplished in a short time in many instances. These observations suggest one explanation of the supervention of one clinical type of infection on another, as in the sequence of tonsillitis, arthritis, endocarditis, etc. The organism may be transmuted and may select another site for habitat and set up a new focus of infection. If the host becomes exposed to one of the mutants of whatever type, the site of infection is more likely to be invaded, corresponding to the environment to which that organism thrives more easily. The mutant that thrives best on the tonsil will set up an infection there, and the one that thrives more easily on the heart valves will cause an endocarditis. From what has been said previously, an organism may be changed during an illness into another form, and this in turn will select for its habitat a new focus. Clinically, it is well known that in a streptococcus tonsillitis the heart should be closely watched for a focus of infection, or the joints for an arthritis.

C. Krumweide, Jr., and J. S. Pratt find by their observation that gentian violet and allied analin dyes have an influence on bacterial growth, dividing bacteria into two groups corresponding in general to the reaction to the Gram stain. Among Gram-positive bacteria a strain is occasionally encountered which will not grow on violet agar, differentiating it from other members of the same species or variety. The reaction is qualitative, although the qualitative characteristics are more marked with some species than others. The streptococcus-pneumococcus group differs from other Gram-positive bacteria in their ability to grow in the presence of amounts of the dye sufficient to inhibit the other species. The dysentery bacillus group shows marked variation in the presence of dyes. In the case of fuchsin the variation approaches closely a specific difference between the dysentery and paradysentery groups. The variation of the latter groups with other dyes shows no corelation with the common differential characteristics. A closer study might reveal variations in other characteristics which would parallel the different reactions to dyes. Decoloration with sodium sulphite robs the dyes of some of their inhibitive powers. C. E. Simon and M. A. Wood find that the inhibitory effect which certain dyes like gentian violet, methyl violet, dahlia, etc., exercise on certain bacteria is not referable to their violet colors, but to their chemical structure, as triamino-triphenyl methanes, and is intimately dependent on their auxochromic groups. Also they find that the acid dyes, irrespective of their chemical structure and color, do not possess their inhibitory power.

Proescher claims to have a method of cultivating rabies virus artificially. Many tubes are inoculated and must be kept under observation for two months. Repeated examination failed to show growth before that time. Serum bouillon (1 to 10) is used for the common culture media. Transplantation of growth shows the organism to become larger. The organism is Gram positive. Inoculation of these cultures into rabbits, rats and monkeys caused rabies.

In tests made by Olga R. Provitzky, cultures were obtained from cases diagnosed (Trachoma) acute conjunctivitis, or border-line cases in various clinics for infectious eye diseases in New York, for the purpose of determining the virulence and agglutinating properties of the bacteria. The strain of hemoglobinophilic bacilli isolated from all grades of conjunctivitis seemed to show virulent characteristics, similar on the whole to those described for the influenza bacillus and for agglutination, and that hemoglobinophilic bacilli from the eye are similar to hemoglobinophilic bacilli from other sources in their power to produce agglutinins.

Sachs and Straus and D. J. Kalinski in their studies and observation of 120 cases of syphilis of the nervous system are worthy of note. The Wassermann test, cell counts and the globulin content, determined by the Noguchi method, were made in cases before instituting treatment. They warn against indiscriminate lumbar punctures. In some cases intense headaches and symptoms of meningeal irritation are apt to follow unless some precautions are taken. They anesthetize the site of puncture and keep the patient in bed for fifteen hours. They call attention to the fact that the intravenous method of treatment yields equally as good results as the intraspinous method of treat-

ment. They claim to have confirmed the contentions of Professor Benedict, that free arsenic is in the spinal fluid in twenty-four hours after intravenous injection in one-sixth to one-tenth concentration of that in the whole blood. This is contrary to the universal belief that none of the drug administered intravenously finds its way into the spinal canal. If this is true, the so-called salvarsanized serum, when injected into the spinal canal, is likely to be of little benefit. They also observed that normal serum in one case reduced the cell count of 302 to 30 cells per cm., while the Wassermann still remained strongly positive.

A. Jakob and W. Weygandt report observations on the histology of the nervous system of rabbits infected with syphilis. They find that experimental syphilis, like the human infection, leads to a wide dissemination of the spirochetes in the body. Both the central and the peripheral nervous systems are affected relatively early; frequently there is meningeal involvement. In all the experimental animals, severe inflammation and infiltration were seen. These changes originate in the mesodermal coverings or in the blood-vessels of the entire nervous system. By extension the nerve parenchyma becomes involved. The cells concerned in the infiltrative process are chiefly lymphocytes, plasma cells and polyblasts. Of particular interest are the localized processes. These may consist of granulation tissue with large numbers of plasma cells, both in the peripheral and central nervous systems, with tumor formation, or there may be a localized collection of plasma cells in the neighborhood of a markedly infiltrated vessel which has led to severe degenerative proliferative changes in the contiguous nervous tissue.

Alverens found by experiments on rabbits that long-continued administration of salvarsan intravenously brought about a slight nephritis, attributable to the arsenic contained. In the toxic doses administered during a short time, marked fall of blood-pressure and serious interference with renal function occurred, but lesions were not visible in the kidneys. If neosalvarsan was administered for a long period, nephritis was not clinically observed, although definite change could be demonstrated in the kidneys. If administered for a short time, the giving of neosalvarsan was less deleterious to the animals than salvarsan. If nephritis had been previously excited by cantharidin, rabbits showed marked sensitization to salvarsan; whereas, if the nephritis had been caused by mercury or chromic salts, that is, were essentially tubular, no ill results were obtained till large doses were employed. Animals with aortic and tricuspid incompetence were treated, with the finding that cases of tricuspid insufficiency, with resulting congestion of the abdominal organs, bore salvarsan worse than those affected merely by an aortic leakage.

Smith reports the results of interchanging epithelial linings from one organ to another. Thus he grafts the gall-bladder lining on the urinary bladder, and *vice versa,* as well as utilizing the uterine coverings in both organs. The epithelium of the gall-bladder and uterus became replaced in the urinary bladder by a transitional epithelium, and the epithelium of the urinary bladder and uterus was replaced by the columnar epithelium of the gall-bladder when transplantation was made into that organ. This doubtless is due to the fact that the regional epithelium is in a better position for proliferation than the graft epithelium, and Smith does not attempt to suggest that an actual transformation from one type of cell to another occurs. When epithelial tissue of two types is transplanted side by side into the peritoneal cavity, a cyst is formed in which both tissues independently take part, and in which neither one displaces the other. When invasion and replacement of one epithelial tissue by another takes place, as in the foregoing experiment, Smith thinks that the environmental conditions act unfavorably on the one and favorably on the other. This is exactly what might have been expected; nevertheless, we mention the subject because of the ingenious methods which are used to provide the proof.

Douglas reports a study on a cellular content of the blood after the use of various sera. It has been well known that on the introduction of bacterial antigens into animals, a response may be observed not only in the development of antibodies, but also in the change in the numerical blood-picture. Most commonly a leukocytosis accompanies the appearance of the antibodies. Metchnikof attributed considerable importance to this leukocytosis in the belief that some of the antibodies in the serum had their origin in the destroyed leukocytes. Douglas carried out a series of observations on the actual change in the blood-picture on the introduction of homologous and heterologous sera. The error in the observations was controlled as nearly as possible in first establishing the

mean daily and individual variation of the leukocytes, red cells and hemoglobin. On inoculating a healthy man with 10 c.c. of normal horse serum, a leukocytosis of 13,400 reached its maximum within twenty-six hours, and declined to about normal in four days. The inoculation of the same individual with 2.5 c.c. of diphtheria antitoxin gave rise to a comparable leukocytosis in the same period of time, and disappeared with equal rapidity. It would appear, therefore, that the leukocytosis is in response to the foreign serum, and similar to that produced by other proteins containing antibodies. On the introduction of a third quantity of serum (antistreptococcic), little or no leukocytosis was obtained. The author suggests that an immune body may have been developed by the repeated use of the serum, which prevents leukocytosis, rather than that the serum itself contains a body producing leukopenia. The response in the production of leukocytosis is mainly by the polymorphonuclear leukocytes. The change in the number of leukocytes in rabbit blood was not parallel to the results in man. A leukopenia developed on the injection of normal and immune horse serum. No evidence was found that the antibodies, as such, had any influence on the cytology of normal blood of either man or rabbits.

Carmac calls attention to the relation of dental sepsis to the general system. In cases where the cause of infection is obscure he maintains that a brick-red tinge at dentogingival margin, about one-sixteenth of an inch wide, quite distinct from the whitish-red color of the healthy gums, marks areas of infection. These areas bleed readily on slight pressure. In more advanced cases a diseased tooth becomes loosened, and can be removed from its socket; a healthy tooth is absolutely immobile. Again, gross signs, such as destruction of the cemented portions, surface necrosis and visible discharge of pus, together with more obscure signs, should not be unrecognized, but is often the case. Not infrequently arthritis, general systemic infection or grave anemia of oligochromemic type, may be present in the early stage of dental sepsis. Oligocythemia occurs in cases in which the system has been involved for some time. Polynuclear leukocytosis is rarely found even when large pockets of pus exist in and about the mouth. Glandular enlargements are frequently found, both in upper and lower jaw. The submental and cervical glands are those mostly affected.

Tinel has examined histologically three cases of tabes in which gastric crises occurred, and concludes that the essential lesion is an inflammation and degeneration of the posterior roots of the dorsal spinal nerves. It is by these roots that the sensory fibers from the splanchnics reach the ganglion of the sensory nerves, and eventually the spinal cord. The lesions found in the splanchnics were quite marked in these three cases and consisted in a considerable diminution of the slender myelin fibers. The centrifugal fibers, on the contrary, were nearly intact. It is quite evident that this lesion is secondary to the changes in the dorsal posterior root. It is identical with that which is obtained on experimental section of the posterior roots, which interrupts the small fibers which run from the spinal cord to the splanchnic. The author concludes, therefore, that the cause of these changes is an inflammatory degeneration of the posterior root. It is this inflammation which causes the pain in the stomach and the intercostal pains, since the sensory fibers of these two regions take their origin in the spinal ganglia and run in the posterior roots to gain the spinal cord. The irritation of these fibers which have not yet undergone degeneration may be communicated to the bulbar centers, and thus occasion vomiting.

NEUROLOGY AND PSYCHIATRY

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While there have been no startling discoveries in the domain of nervous and mental diseases during the year 1914, there have been many contributions to neurological and psychiatric science in the medical literature of the year, some of which have added new knowledge of these subjects and others have advanced our understanding of that already known. In the field of experimental neurology, there is an interesting contribution on the disappearance of Purkinge cells in the cerebellum in conditions of exhaustion from various sources (Hitchings, Crile's laboratory, Jour. Exper. Med., Dec. 1, 1914, p. 595), showing that increasing nerve-cell exhaustion is accompanied by increasing nerve-cell disappearance, which is found at its maximum in malignant disease and is very high in exophthalmic goiter.

Hastings (Complement - Fixation Tests in Chronic Infective Deforming Arthritis and

Arthritis Deformans, Jour. Exper. Med., July, 1914) working on complement-fixation tests in arthritis deformans finds that *Streptococcus viridans* is the probable causative agent of the disease in many cases of arthritis deformans, probably 40 per cent. or more of the cases being produced by this germ, and that gonococci are very rarely, if ever, causative in the production of arthritis deformans.

The adrenalin index in the suprarenal glands in various conditions of health and disease was found by Sydenstricker, Delatour and Whipple (Jour. Exper. Med., June 1, 1914) to vary in many conditions, estimated by the chemical colorimetric method, which proved the most accurate in the experimental work. The two adrenal glands in the same individual, as a rule, were found to contain about the same amount of adrenalin per gram. Normal dogs killed by short ether anesthesia and bleeding from the carotid show an index varying from 1.2 to 1.8 mm. This index is lowered in acute intoxication, especially those associated with intestinal obstruction and closed intestinal loop. Intravenous injection of the poison found in closed duodenal loops, sufficient to cause fatal shock, produced a great drop in the adrenalin index, at times below one-quarter the normal. Anesthesia by chloroform or ether also causes a drop in the adrenalin index, depending upon the length and depth of anesthesia. Rapid rise in the adrenalin index occurs after recovery from a sublethal toxic dose of the poison of the closed duodenal loops and after anesthesia not carried to fatal termination. Chloroform, phosphorus and hydrazin—all liver poisons—cause a marked drop in the adrenalin index. Extirpation of the pancreas, with prolonged glycosuria and death, produces a great drop in the adrenalin index. This may have very valuable bearing in human diabetes. Disease of one adrenal in man may be associated with compensation, for a time at least, on the part of the other adrenal, which showed an index of double value in a case of tuberculosis of the diseased adrenal body. In pernicious anemia the adrenalin index was found increased even to double the normal. This is held to be a matter of interest in reference to the recent theories which indicate that the spleen and adrenal may be concerned in lipoid metabolism, apt to be profoundly disturbed in pernicious anemia. On the other hand, in secondary anemia due to repeated hemorrhage or the intoxication of cancer or tuberculosis a fall in the adrenalin index is to be noted. Cachexia, other than that in pernicious anemia, causes a decreased index, whereas the opposite is true in pernicious anemia. In acute infections, such as typhoid fever, septicemia, peritonitis and similar conditions, the adrenalin index is apt to be normal or slightly below, while diseases associated with an elevated blood pressure were found, contrary to the usual view, to manifest a normal or slightly subnormal adrenalin index.

The above experiments, notably the last conclusion as to diseases of the heart, kidney and blood-vessels associated with a rise of blood pressure, are of considerable importance when referred to our clinical experience. We are wont to connect cases of high arterial tension with an increased adrenal content, which is not in accord with the experiments above alluded to, at least so far as the index of the adrenal bodies is concerned. It remains, therefore, to be demonstrated whether the adrenalin index of the glands themselves is the same or stands in direct ratio to the adrenal body content as a whole. The above experiments also leave out of consideration the influence of psychogenic emotional factors altogether, which influence the adrenalin output materially.

An interesting series of experiments in reference to the calcium content of the blood and its bearing on nervous excitability emanates from the Department of Pathology of Physicians and Surgeons, New York, by MacCallum, Lambert and Vogel, who removed by dialysis the calcium from the blood of animals in tetany (Jour. Exper. Med., August, 1914, p. 149). Their conclusions indicate that hyperexcitability of the nerves is due to the lack of calcium in the blood and that the removal of the parathyroids causes a tetany through deficiency of calcium in the blood and tissues. This can be relieved by replacing the blood of tetanized animals with normal blood with a disappearance of the symptoms of hyperexcitability, whereas this result was not attained when dialyzed blood, poor in calcium, was used instead of normal blood.

Studying the relation to the blood in the virus of epidemic poliomyelitis both on animals and human beings at the Rockefeller Institute and hospital, Fraser, Clark and Amoss summarize their experience as follows (Jour. Exper. Med., March, 1914):

"Specimens of human blood taken during the paralytic stage of poliomyelitis and post mortem have proved not to be capable of infecting Macacus monkeys.

"Specimens of monkey blood taken at various stages of experimental poliomyelitis have

not proved as a rule to be capable of infecting monkeys. In a single instance, among ten tests, infection was secured with a specimen of blood removed at the beginning of the paralysis on the seventh day following an intracerebral inoculation.

"When suspensions of the spinal cord from a paralyzed monkey have been injected into the brain or simultaneously into the brain and spinal canal, the blood removed from one to forty-eight hours later failed to cause paralysis after intracerebral injection.

"When large volumes of active filtrate are injected into the circulation the blood remains infective for seventy-two hours at least, but may be no longer infective after ten days when the paralytic symptoms first appear. When, however, the filtrate is injected in smaller amount or when a filtrate of a less active virus is employed in large quantity, the blood either fails to convey infection or conveys it irregularly.

"It is only when overwhelming quantities of an active virus are injected into the blood that paralysis results. The injection of moderate doses is not followed by paralysis, although the virus may still be detected in a blood sample twenty-four hours after the injection. The existence of a mechanism capable of excluding the virus within the blood from the central nervous organs is therefore inferred.

"Infection is accomplished far less readily through the circulation than by means of the more direct lymphatic and nervous channels of communication with the central nervous system.

"Several series of feeding experiments conducted with the biting stable fly (*Stomoxys calcitrans*) resulted negatively."

In association with the above findings comes another communication by Flexner and Amoss relative to the method of communication of poliomyelitis and the penetrability of the virus to the central nervous system (Jour. Exper. Med., April, 1914, p. 411). It is shown that an active poliomyelitis virus readily causes infection in monkeys when introduced into the brain, subarachnoid spaces or peripheral nerves, but that far greater quantities are required to produce infection when injected directly into the circulation and that both the onset of the usual symptoms and the paralysis are delayed when the vascular route is chosen instead of the neural. It is to be inferred, therefore, that the tissues of the central nervous system do not withdraw the virus from the blood directly, as a rule. The original site of infection is the nasopharyngeal mucous membrane, from which the virus may readily pass through the lymphatic channels surrounding the filaments of the olfactory nerve to the leptomeninges, where it reaches the cerebrospinal fluid. It had already been shown that the propagation of the virus from the olfactory lobes to the medulla and spinal cord could take place (Flexner and Clark). Another possible modus of transmission must, however, be considered by way of the general circulation to the nervous system, not directly, but by way of the cerebrospinal fluid after the normal barrier presented by an intact choroid plexus had been broken down. It is well known that the choroid plexus is capable of excluding from the cerebrospinal fluid many substances contained within the blood, but that this barrier is not absolute. It is capable of being broken down, notably by the pathogenic action of infectious micro-organisms. Insufficient quantities of virus when introduced into the blood do not cause poliomyelitis, because they fail to injure the choroid plexus, whereas larger quantities so far destroy its resistance that the plexus becomes penetrable. This operation, however, requires time and we find instances, both experimental and human, in which the virus of poliomyelitis reaches the central nervous system by way of the cerebrospinal fluid directly that clinical symptoms of the disease are much more rapid in development than when the infection is conveyed indirectly to the cerebrospinal fluid via the blood-stream and impaired choroid body.

A distinct contribution to our knowledge of cerebellar symptoms and localization is presented by Mills and Weisenburg, who have carefully presented their observations in the *Journal of the American Medical Association*, Nov. 21, 1914, p. 1813, in an article describing their kinematographic experience, which reveals many new points of cerebellar symptomatology. It was found that the gait of cerebellar patients, in the majority of cases, is chiefly trunkal. The trunk may go backward, or forward, forward and to one side, or simply to one side. The inclination may be total or partial. In every attempt to walk, the patient finds it impossible to stand in the erect posture for any length of time. The trunk always leads the movements and the legs follow the trunk. Their observations of pelvic-girdle and shoulder-girdle movements on locomotion, both when the patient was standing and when on all fours, showed that the asynergy is apt to be just as marked in the shoulder girdle as in the pelvic girdle. The gait of the cerebellar patient has usually been

considered as reeling or drunken, but the kinematographic presentation shows that our former ideas of the gait in cerebellar disease is erroneous, inasmuch as an intoxicated person walks irregularly and reels in many directions, whereas in cerebellar disease there is always a distinct manner of walking in each individual patient, which is determined by the trunkal position and the relative preponderance of asynergy in the pelvic and shoulder girdles. Many of the clinical symptoms in cerebellar disease are carefully discussed in the above article, such as the hypermetry of the extremities, adiadokocinesis or coordination of movements on pronation and supination of the forearm and hand, which shows the asynergy of the upper extremities and defects of these movements; the asynergy of the eye-balls, indicating that the eyes are never at rest; movements of the head and neck, which were found to maintain the same plane as the trunk; and many symptoms of clinical significance discussed in detail. Cerebellar localization, both general and focal, is discussed at some length in the article referred to, but it would be necessary practically to reproduce the article in full to bring out all of the points of importance which their investigations reveal. We, therefore, recommend to those interested in this subject a careful study of the original articles of Mills and Weisenburg, which we regard as the most important contribution to the literature of cerebellar disease and localization up to the present time. Our knowledge of the function of the cerebellum is very markedly increased by the careful observations they have recorded and shows the value to the study of medicine which the moving-picture machine can bring to us.

During the past year, as during the previous one, medical journals have been flooded with communications detailing the experiences of the writers in the treatment of syphilis of the central nervous system. It is obviously impossible to analyze all of these communications, but special reference must be made to a splendid exposition of the entire subject by Head and Fearnsides, entitled, "The Clinical Aspects of Syphilis of the Nervous System in the Light of the Wassermann Reaction and Treatment with Neosalvarsan," together with that of McIntosh and Fildes, "A Comparison of the Lesions of Syphilis and Parasyphilis, together with evidence in favor of the identity of these two conditions," contained in the last number of *Brain*, September, 1914. These two articles together make a volume of 195 pages, detailing the experience and research at the London hospital up to that time, with careful clinical discussion of most, if not all, of the phenomena of symptomatology, pathology and treatment.

Thoughtful study of the many articles upon this subject shows that there is still a considerable disparity of opinion among internists as to the efficacy of the modern antisyphilitic methods in the treatment of this disease, but it is evident that this arises out of the fact that the character and intensity of invasion of the central nervous system figures so greatly in the cases under treatment. Very many writers have become unduly optimistic on account of the fact that they have failed to differentiate syphilis, largely confined to the membranes and blood-vessels, from syphilis affecting the essential nervous tissue. Where the disease is practically limited to affections of the vascular and meningeal systems, the results of treatment have been almost uniformally good, but where the lesions have already invaded the essential nerve tissues, with secondary damage to the structures therein contained, the results of treatment have been doubtful, except in those instances in which an active inflammatory process has existed. We may reasonably conclude, therefore, that the question of the ultimate efficacy of antisyphilitic methods directed toward the intradural sac must still be regarded as an open one. My own critical estimate of the situation at the present time may be summed up about as follows:

1. All syphilitic manifestations are due to the activity of the *Spirochaeta pallida*, but the clinical pictures of central nervous system invasion depend upon the location and intensity of the syphilitic process and the length of time it has been in play.

2. The ultimate result of treatment will depend upon the type and location of the pathologic process, probably irrespective of the presence or absence of a Wassermann reaction. We must consider at this time that a positive Wassermann reaction, carefully done and excluding all possible complicating conditions, spells syphilis, but a negative Wassermann does not indicate the absence of syphilis, for we must recognize certain distinctly negative types, *quoad* the Wassermann test alone, in which the clinical syndrome points positively to syphilis.

3. In instances in which the pathologic process is largely confined to the meninges and blood-vessels, a good result may reasonably be

anticipated from proper intensive antisyphilitic treatment.

4. In instances in which there has occurred invasion of the nerve structures themselves in the early stages of syphilis, a good result may be hopefully awaited under vigorous treatment, but the outlook is not nearly so promising where these same nerve structures are invaded late in the course of the disease. In cases in which manifest degeneration of the structures of the nervous system has already taken place the damage is irreparable by any method of treatment yet devised.

5. Inasmuch as it is extremely difficult to determine from the clinical symptoms alone or together with positiveness of the Wassermann reaction, whether the syphilitic process has passed beyond the active stage, it is advisable to subject most cases of syphilis of the nervous system to the combined internal, intravenous and intradural methods of treatment, but it should be remembered that some cases are not suited to intradural serum or serosalvarsan injections. Patients who are progressing favorably under treatment, which had not embraced the intraspinous injections should probably not be subjected to the latter procedure. Cases which are either uninfluenced by previous treatment or which are clinically progressing unfavorably should be intensively treated by every known antisyphilitic method, as there is a possibility of gain and little chance of making matters worse.

6. The earlier the recognition on the part of the physician of syphilitic invasion of the central nervous system, the more hopeful the outlook of treatment becomes; therefore, it is essential to study carefully the earliest phenomena manifested by the nervous system in cases of syphilis, so that treatment may be vigorously carried out before the advent of secondary changes.

7. The intensity of the Wassermann reaction of the cerebrospinal fluid is probably a fair, but not an absolute, criterion of the degree of activity of the syphilitic process affecting the central nervous system. This reaction should, however, be supplemented by all other means of laboratory investigation and not be alone relied upon. In instances in which the Wassermann reaction shows a steady decrease under treatment, it should be considered an evidence of favorable progress, except in some instances which manifest, clinically, symptoms of increasing degree, under which circumstances treatment should be pushed with the greatest caution. On the other hand, patients who manifest distinct improvement clinically but whose Wassermann reaction of the cerebrospinal fluid continues to remain uninfluenced by treatment should be kept under persistent and intensive treatment.

8. It is highly probable that seromercurial injections may be employed intraspinously instead of serosalvarsan, with the same degree of benefit, or possibly even with greater benefit, to the patients. It is even probable that the serum of syphilitic individuals intensively treated by the old methods of mercury and iodids may be injected into the dural sac with resultant benefit to such patients.

9. At the present status of the question, no one should take a nihilistic stand as to the ultimate result of intravenous-intraspinous antisyphilitic therapy. Our experience to date indicates that this method presents an avenue of attack against spirochetes, lodged within the nervous system offered by no other therapy; moreover, that it achieves very excellent effects in many cases untouched by other less drastic measures; on the other hand, a too sanguine attitude as to its efficacy in all conditions of central nervous system lues is not justified, for many cases are either only faintly, or not at all favorably, influenced thereby and some have been deleteriously affected. It will require several years of experience to determine whether it has permanent value, questionable value or, practically, none at all.

10. It is highly probable that lymphogenous channels of invasion of the central nervous system, as well as vascular, occurs, accounting for late manifestations of nervous system syphilis, minus initial signs.

In the field of psychiatry few achievements of note, indicative of advance, have been recorded. The Abderhalden test in its application to abnormal mental states is still largely in the experimental stage. Some reports show evidence of its worth, diagnostically, differentially and prognostically, notably in dementia praecox. There is reasonable, even strong, hope that, scientifically applied, the test may prove of great value. Meanwhile, the writer takes occasion again to call attention to the fact that the Abderhalden test is one of great delicacy, subject to many errors of technic and interpretation, and that to be accurate it must be carried out with a surgical nicety and precision which few laboratories are at present equipped to render and few laboratorians, how-

ever otherwise skilled, patient enough to execute.

Of very great importance is the growing recognition of psychogenic factors in the production of some psychoses and the influence of the emotions upon the ductless glands or chain of glands, whose functional integrity stands in close relationship to normal mental output. Disturbances in the functionation of the pleuriglandular system have unquestionably marked effect upon the mechanism of the nervous system, whether these glands, singly or in connection, be sites of organic disease, or influenced by the emotions, notably those of fear.

Upon the psychogenic origin of certain psychoses and neuroses, psychotherapy, in one or another form, is based; it were well at this moment to remind that each case is a law unto itself, requiring careful, painstaking study and that more harm than good must and will result from indiscriminate psychotherapeutic attempts.

PEDIATRICS AND ORTHOPEDIC SURGERY

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The purpose of the pediatric literature of 1914 might well be expressed in the one word "prevention." Eugenics, infant welfare, general prophylaxis and immunization against specific diseases have occupied a large part of the recent publications.

The science of eugenics still lacks sufficient foundation in experience to render it stable. It has thus far been developed largely by enthusiasts whose efforts have often been misdirected. The right of the infant to be well born will never be granted him by legislative bodies until an overwhelming public opinion, intent on recognizing that right, has been created by education. In the education and training of the mothers-to-be must be found the greatest opportunity for the promulgation of the science of eugenics.

Infant-welfare work continues to make tremendous strides. The federal government has allowed the Federal Children's Bureau, established in 1912, an appropriation of $165,000 this year for carrying out its work. New York State has three traveling infant-welfare exhibits under the direction of the Division of Child Hygiene in the State Department of Health. Ohio has a similar traveling exhibit sent out by the State Department of Health. New York, Boston, Cleveland and several other cities have created divisions of child hygiene in their health departments. Many cities have followed Rochester's example and established municipal infant-welfare stations. These are but the most striking illustrations of the acceptance on the part of the federal, state and municipal authorities of their responsibility in the protection of infancy. A vast amount of infant-welfare work still remains in the hands of various philanthropic organizations and of individuals, many of whom are working at cross purposes or duplicating work done by others. As rapidly as possible this work should all be taken up by public authorities in order that it may be carried on under more intelligent direction and with less waste of energy and money.

The scope of the work done by these infant-welfare stations has broadened rapidly. This is well illustrated by the definition of a "milk station" by Waldron. "Milk stations do not mean simply pure milk, but a combination of pure milk, a capable matron to handle it, a place for mothers to bring their strong babies to keep them strong, or weak or sick babies, a nurse to meet them and return to the home to treat the sick baby and to teach the mother how to care for and feed the infant and a physician to oversee, direct and encourage all."

The most recent development in this work is that of prenatal care. This work has been taken up to combat the increasing mortality rate during the first week of life. The census figures for 1910 and 1912 show that the actual number of deaths from one week to a year had decreased 6,918, while those during the first week had increased 5,670. The census figures for 1912 further showed that 64 per cent. of deaths under one year were ascribed to premature birth and congenital debility. While it is yet too early for statistical results it is certain that "prenatal prevention" will materially lower these figures.

The subject of infant feeding always receives a vast amount of attention. Larger feedings at longer intervals are being advocated more and more generally. It is believed by Rosenstern and Langstein that this method has done a great deal toward increasing the prevalence of breast feeding. Early weaning also continues in favor. Reuben says that the breast milk of most women deteriorates or becomes insufficient after the seventh or eighth

month. He therefore advises weaning at that time and says that those weaned altogether at that time do better than those given mixed feedings.

Myers thinks that too little attention is paid to the diet of nursing mothers. He believes that the use of fruits, fruit derivatives, spices and highly flavored vegetables should be forbidden at the beginning of lactation and when digestive disturbances manifest themselves.

In the artificial feeding of infants whole milk dilutions, owing to their simplicity, continue to be the method of choice. Modification with maltose is coming into wider use in this country, due to the influence of the German pediatrists. Morse and others, however, still recommend lactose as the least harmful.

Albumin milk, as suggested by Finklestein and Meyer, is in wide-spread use in nutritional disorders. Owing to its costliness, difficult preparation and disagreeable taste a number of substitutes have been devised, but with no striking improvement in the results.

Bosworth and Bowditch report some preliminary experiments with dry powdered paracasein as the principal protein constituent in infant food, in which they found that the paracasein was very easily digested and absorbed, and that the "nitrogen balance" could be maintained by its use.

In a series of eighteen infants fed on boiled milk from 4 to 9 months, Dennett reports that all did well except one that developed an anemia with splenic enlargement. He remarks that this could hardly have been caused by the food used. As a result of his observations he concludes that boiled milk is of service in the treatment of digestive disturbances, that a higher protein is tolerated in boiled milk, that it is not more difficult of digestion than is "raw" milk and that nutritional disturbances do not follow its use when properly administered. He admits that it is more apt to produce constipation. Morse says there are only two reasons for boiling milk — to destroy bacteria and for use in disturbances of casein digestion.

Among the infectious diseases, diphtheria has received considerable attention. Park, Zingher and Serota, following the work of Von Behring published in May, 1913, attempted to actively immunize patients in scarlet fever wards with mixtures of strong diphtheria toxin and antitoxin, either slightly antitoxic, neutral or slightly toxic to the guinea-pig. The injections were made subcutaneously or intramuscularly in doses of from 0.25 to 1 c.c. of undiluted serum. Some received as high as 3 to 5 c.c. The injections were repeated two or three times at intervals of from three to seven days. They found that a very decided increase in antitoxin was produced in a short time (in some as early as seven days) in all persons who had natural antitoxin (who were immune before the injections). Less than 25 per cent. of those who had no natural antitoxin reacted to active immunization to a degree sufficient to protect them surely. A large number developed a trace of antitoxin. They therefore conclude that individuals definitely exposed should be immunized both actively and passively.

The same observers tested 700 scarlet fever patients by the Shick intracutaneous reaction with diluted diphtheria toxin. The method consists of injecting 0.1 c.c. of diluted diphtheria toxin, representing $\frac{1}{50}$ minimum lethal dose for the guinea-pig, on the flexor surface of the forearm. A positive reaction, which is similar to a Von Pirquet tuberculin reaction, means, according to Shick, that there is less than $\frac{1}{30}$ unit of antitoxin per 1 c.c. of blood, and that the subject is, therefore, susceptible to diphtheria. Of the 700 thus tested, 400 gave a negative reaction, that is, were naturally immune, and therefore needed no immunization.

Inasmuch as there is no free antitoxin in the blood in acute diphtheria, it has been suggested that this test be used diagnostically. A negative reaction (showing the presence of antitoxin) would thus be evidence against the diagnosis of diphtheria.

In some recent investigations, Shick and his associates have shown that a suitable dose of antitoxin renders an individual immune to a dose of toxin administered later, and that antitoxin even in large amounts has but little effect on toxin previously administered. They have shown further that antitoxin administered in amounts of 100 units per kilogram of body weight exerts a maximal effect on toxin subsequently introduced. The influence on toxin simultaneously introduced was increased by doses up to 500 units per kilogram. The retroactive effect on toxin previously administered was slight even with the larger doses. As a result of these studies, Shick recommends the use of antitoxin at the earliest possible moment in doses of 100 units per kilogram in mild and medium cases, and of 500 units per kilogram in severest cases. Repeated injections, he says,

are unnecessary if these initial doses are used. He has further shown that for passive immunization a dose of 50 units per kilogram is sufficient. It is to be hoped that further studies will confirm these findings, since they give an accurate, scientific method for calculating the dose of antitoxin necessary in a given case, and since they make enormous and repeated doses unnecessary.

The therapeutic and prophylactic use of vaccines in pertussis has gained some adherents and met much opposition. Hess used several different vaccines, including an autogenous strain both prophylactically and therapeutically in an institutional epidemic of 85 cases and concluded that, while they had no therapeutic value, they were of some aid as a prophylactic measure. Fifty-nine out of 80 children who did not receive protective inoculations developed pertussis, while only 20 out of 244 children receiving the vaccines came down with the disease. Friedlander and Wagner, using the complement deviation test in pertussis, got a positive reaction in all of 18 cases in the paroxysmal stage, a negative reaction in all of 16 normal cases including several cases of bronchitis, and in eleven of twelve cases in the catarrhal stage, in all of which the subsequent appearance of the whoop confirmed the diagnosis. The single negative case was tested at the very beginning of the cough. One other case giving a typical picture of pertussis without a whoop gave a positive reaction. Here again it is to be hoped that confirmation of these findings may be forthcoming, for the control of epidemics under present conditions is practically impossible because of the long incubation period and of the difficulty in making a definite diagnosis during the period of onset.

Hess, in a study of an epidemic of German measles (rubella) attacking fifty or more children in an infant asylum was unable to obtain any growths from blood cultures made in four cases at different stages. He was also unable to produce the disease in monkeys by intraperitoneal inoculation of from 3 to 8 c.c. of blood taken from four different cases. He found, however, a definite relative increase in the lymphocytes in almost all of the cases studied, even preceding the appearance of the exanthem. He suggests that this relative lymphocytosis may serve to differentiate this disease from scarlet fever which in its early stage is associated with an increase of polynuclear cells.

In an excellent and most exhaustive study of internal hydrocephalus experimentally produced in animals and seen clinically, Dandy and Blackfan have added materially to our knowledge of this condition and of the formation and absorption of cerebrospinal fluid as well. As a result of their investigation they conclude that cerebrospinal fluid is derived chiefly from the choroid plexuses, probably both by secretion and filtration. This formation in the ventricles takes place more rapidly than its absorption, and therefore patency of the aqueduct of Sylvius is essential for its escape. Drugs and glandular extracts influence but little its formation. The choroid plexuses are definitely impermeable to solutions of substances in the blood.

Absorption takes place from the entire subarachnoid space directly into the blood and but little by way of the lymphatics. There is practically no absorption in the ventricles. Phenolsulphonephthalein put into the subarachnoid space soon appears in the ventricles and granules similarly placed are quickly distributed uniformly throughout the entire spinal and cerebral subarachnoid space. Internal hydrocephalus may be divided into two anatomical groups, the obstructive and communicating types, depending on the patency or occlusion of communication between the ventricles and subarachnoid space, which, according to these observers, is entirely by the foramina of Magendie and Luschka.

In the obstructive cases they found that the excretion in the urine of phenolsulphonephthalein injected in neutral solution intraventricularly was prolonged from the normal period of several hours to ten days. The time of appearance of the dye in the urine was also greatly delayed — from thirty to fifty minutes, normal ten to twelve minutes. On the contrary subarachnoid injection showed a normal excretion, except in two postmeningitic cases. This evidence of lack of communication between the ventricles where the fluid is formed and the subarachnoid space where it is absorbed was demonstrated clinically in seven cases, and verified at necropsy in five of these. The other two cases are living.

In the communicating group the dye, when injected intraventricularly, appeared in the spinal fluid in from one to seven minutes. Communication was further proved by the rapid appearance of the dye in the ventricles following injection into the subarachnoid space. The absorption of the subarachnoid space in these

cases was very slow (about 10 per cent. in two hours, the normal being 35 to 60 per cent.). The time elapsing before the appearance of the dye in the urine was correspondingly increased, as was the time necessary for its total excretion from the subarachnoid space. This diminished absorption in the subarachnoid space is responsible for the production of hydrocephalus of this type.

This test is of great practical value, since it affords a method of differentiating these two types of hydrocephalus and thus indicates the surgical procedure to be employed in each. In the obstructive type the removal of the obstruction if possible is indicated, while in the communicating type an effort should be made to drain the fluid into tissues where adequate absorption may take place.

These investigations are of interest, too, in the consideration of intraspinous anesthesia and therapeutic intraspinous injections of all kinds, in that they show a rapid diffusion throughout the cerebrospinal fluid of substances introduced into the subarachnoid space. In the light of these findings intraventricular injections of therapeutic substances (as salvarsanized serum) would be contra-indicated except in cases of obstruction, because of the ready communication between the subarachnoid space and the ventricular cavities and because of the negligible absorption in the ventricles.

In the realm of orthopedic surgery, tuberculosis continues to attract the most attention. Surgical treatment of tuberculosis of the bones and joints becomes more and more limited as time goes on. The truly phenomenal results of heliotherapy, especially as observed abroad, are chiefly responsible for this change.

Gillette warns against the use of forcible passive motion, and even of active motion where it produces pain, in all diseased and traumatic joints. He says, "Passive motion should be abandoned in joint diseases."

Fraser, in a clinical study of ninety cases of anterior poliomyelitis, found that paralyzed muscles which responded well to faradic stimulation usually recovered. After a year of unsuccessful treatment, recovery of a completely paralyzed muscle cannot be expected. The important points in the later treatment are massage and prevention of deformity by resisting the relatively strong muscles with mechanical appliances thus allowing the weaker muscles to relax and so recover more rapidly.

Bucholz does not believe that exercise treatment is ever able to cure a flat foot, but that it has a definite place as an educative factor to be used with strappings, casts and, later, plates. Geist, following an idea obtained at Lang's clinic in Munich, uses celluloid for arch supports. These are made on a plaster model of the foot to be fitted, are light in weight, inexpensive, easily made and fit accurately. In the operative treatment of flat-foot, Wilms ankyloses the joint between the astragalus and scaphoid by making a wedge-shaped resection from the anterior head of the astragalus and implanting it in the joint between the calcaneum and the cuboid on the external side. Berndt believes that the chief hindrance to the restoration of the arch is not the displacement of the bones and their subsequent deformity, but the contraction of the peronaeus and Achilles tendons, and of the ligaments on the outer edge of the foot, especially between the calcaneum and cuboid. By cutting these tendons in an old case, he was able to restore a normal arch without any bone operation, and to maintain this result by suitable after-treatment.

Lovett, considering the diagnosis and treatment of backache, says that three varieties of backache can be clinically identified, classifying them on an etiologic basis: (1) chronic ache, due to a forward bent position habitually assumed to relieve displaced and tender pelvic organs; (2) traumatism resulting in chronic irritability; (3) arthritis of the spine. In addition to these there are a large number of unclassified cases which may be explained according to two theories: first, that they are of static origin, and second, that they are due to sacro-iliac relaxation. Sacro-iliac relaxation is of such a nature as to admit of definite proof or refutation by roentgenoscopy and necropsy, and no such evidence is available to establish the existence of such a condition. He further says that immobilizing, strapping and belts, if they give relief, are in themselves evidence that sacro-iliac relaxation does not exist. On the other hand, relief by these measures, as well as the symptoms, fit the static theory perfectly. These static cases are due to either lateral or anteroposterior defective balance. The former are best relieved by building up the sole and heel of the shoe on the proper side; the latter by throwing the center of gravity backward by raising the heels, and applying a therapeutic straight front corset which should be tightest around the pelvis, diminishing in pressure toward the top, where it should be loose, making no pressure on the back at this point.

OPHTHALMOLOGY

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A brief review of the progress in ophthalmic investigations and procedures developed during the past year must of necessity avoid entering upon a detailed analysis of the literature, and in such a generalized review it is not possible to give honor to whom honor is due in every instance.

This has been a year in which it may be said that we have occupied ourselves in improving upon the previous year's developments. Numerous have been the brilliant and invaluable advances made, but in most instances the progress has been along lines already indicated.

In operative ophthalmology the bulk of endeavor has been centered around two well-established operations, the extraction of the lens within its capsule, and the trephine operation for the relief of glaucoma. The arguments, pro and con, are all deserving of the greatest attention and due acknowledgment must be granted to the supporters of each side. The frenzy of enthusiasm which arose with the announcement of the Smith India operation has somewhat subsided; not, however, until many ophthalmologists had been, by their unhappy experience, convinced that it is not an operation which can successfully be done by following printed directions. An impartial review of the reports at hand indicate very clearly that the Smith India operation is the operation of choice when it is performed by an operator whose experience has been most extensive. For the operator whose training has not been most exceptional it is a dangerous surgical procedure which jeopardizes vision far more than does the classic operation preceded by capsulotomy. That the original operation, as devised by Smith, is in need of modification is evidenced by the many means devised for avoiding its very manifest dangers. It is a question whether or not the technic has yet reached the desired point.

Lieut.-Col. Smith has this year published a report which is most valuable on "The Treatment of the Earlier Stages of Senile Cataract." His results obtained by the subconjunctival injection of cyanid of mercury are most promising and further endeavor along this same line of treatment is not only warranted but should receive at our hands a most thorough trial. This method of treatment offers a very promising future and means for a great many patients a more than temporary respite from the discomfort and unhappiness of the heretofore unhindered oncoming blindness. Lieut.-Col. Smith's results have been brilliant and offer to us a remedy with which there is everything to be gained and nothing to be lost.

Col. Elliott's operation of trephining for the relief of glaucoma has not yet proved its full worth. There are many disputed points in the technical detail of the operation and it is yet a point of contention as to the actual method of healing. We find ourselves still at a loss to account for the glaucomatous state and thus far not fully competent to state just what takes place following operation. Ophthalmology presents no more difficult operation than that of iridectomy for the relief of glaucoma, and the trephine has at least given us a far simpler operation and one which seems comparatively free from logical criticism when we compare results with those obtained from the old operation. The late infections following the trephining cannot be ignored, although the seriousness of this complication would lose some of its force were it possible of comparison with the subsequent complications of the iridectomy. From reported cases recurrence of increase in intra-ocular tension subsequent to trephining is possible though not frequent. The diversity of opinion in regard to the choice of this operation in the various types of the glaucomatous state is somewhat disconcerting and the variety of instruments, new and modified, would lead one to the logical conclusion that we have not yet seen this operation in its perfection. It seems reasonable to presume that until we know more concerning the actual causation and pathology of glaucoma we will have difficulty in determining an operation which is absolute and permanent in its results.

The LaGrange sclerectomy offers a more difficult operation, with a higher reported percentage of failure than found following the Elliott trephining. Both operations have their ardent supporters and the attention of ophthalmologists is well deserved by both. The future developments in simplicity of technic and the higher percentage of success will determine in future which is the operation of choice, and inasmuch as neither has yet reached perfection it is but fair that we withhold final judgment. Conservatism in preference and performance is to be advised. It cannot be denied that we are gaining in the study of glaucoma and it seems probable that the *bête noir* of

ophthalmology will soon be a far less serious problem. The importance of tonometry and perimetry in glaucoma has been overlooked by some investigators, thereby lessening the value of their findings.

Many new operations for numerous pathologic conditions of the eye and adnexa have been reported, but the progress of ophthalmic surgery during this year has not been of a spectacular nature nor have many particularly promising improvements been projected.

Measures for the determination of functional abnormalities have received their due amount of attention and the papers of Francis Valk, "Ocular Rotations," Jackson on "Operations on the Extra-Ocular Muscles," and Savage on "Heterophorias and Their Treatment," may be called representative of the *status praesens* of extra-ocular-muscle investigations. Dr. Lucien Howe, in his paper on "Unanswered Questions Concerning Heterophoria and Heterotropia," has outlined for us a program of investigation which it is hoped a review of the coming year will report as having progressed favorably. May the next year also bring about a more universal nomenclature and a standardization of tests for the various muscular imbalances.

Reports on trachoma, iridocyclitis, scleritis, retinitis, etc., have been particularly abundant, but in the majority of cases along lines already established. Two particularly interesting papers on trachoma are those of O. S. Phillips and W. H. Harrison.

The index of the various journals would indicate, as has been said before, that this has been a year devoted largely to improvement upon certain notable departures inaugurated during the preceding year.

On the whole, ophthalmology has kept pace with the other special branches, but next year should see an increase in original work. Many of our foreign confrères are at present under arms and it behooves the American ophthalmologists to avail themselves, qualify themselves, if you please, for the field which is now open to them. The eye clinics of this country have already made wonderful advance, and the occasion has now arisen which demands that we give to the world the opportunity for postgraduate training which we have so long been wont to seek abroad.

In two most important fields of ophthalmology the progress for the year has not been satisfactory. I refer to refraction and the conservation of vision. The movement for the promulgation of the doctrines of conservation has progressed, but not in proportion to its worth. Refraction has been going along as it has for the past few years, and with the exception of a few scattered papers this branch has received very little attention. In the matter of refraction and conservation we are all inclined to remain smug and comfortable in the misconception that we have reached the ultimate. Owing to the unsatisfactory refraction work done by many of us there is a certain illegitimate offspring which thrives upon our own indifference to this very important field.

A closer study of scientific refraction and a deeper research into the effects of error of refraction are of paramount importance. A goodly number of our profession are suffering with professional myopia and cannot see the handwriting on the wall. We are all inclined to be self-satisfied. We continue to teach as we were taught, and in the medical department of our state university we have the same equipment, the same teaching facilities in the clinic that Dr. John L. Thompson and Dr. Dan Thompson had when they taught ophthalmology. And in many of our own offices the same condition prevails—inferior equipment, which in turn means that we are practicing out-of-date ophthalmology. I believe I am not unfair when I accuse ophthalmologists as a whole of not being as actively progressive as are the men in the allied specialties.

This state has produced nothing of importance during the year and it is to be hoped that in 1915 there may be more proof forthcoming that we as ophthalmologists are progressing and not standing in our tracks, the tracks made for us by men who are dead and gone.

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OTOLARYNGOLOGY

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The European situation is largely responsible for the fact that the latter half of the year 1914 has given us but little in otolaryngological literature. As was stated by Wales in his 1913 review, a large percentage of this literature comes from certain European nations, particularly Germany. While it is true that in many departments of medicine, particularly surgery and internal medicine, America has a large number of men engaged in research work,

whose contributions have added much of great value to our art, yet in otolaryngology we are still woefully weak and must still depend, in a great measure, on our foreign confrères.

In addressing the American Laryngological Association, and later the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association, Barnhill made certain observations and recommendations which, if adopted, would no doubt soon give us more prestige among men engaged in this specialty. He calls attention to the fact that otolaryngologists are now operating on the head and neck, in addition to the nose and throat, and suggests that we should be divided into two classes—those who operate and those who do not. All of us are not equally qualified as surgeons, and the operative and non-operative fields are equally great, as is the opportunity for fame.

EAR

Hugel,[1] in speaking of "Radium and Mesothorium in Deafness and Ear Noises," recommends placing a capsule containing radium or 5 gm. of mesothorium for one-half to one minute on the mastoid process. In most cases he reports the relief as immediate. From six to eight applications usually effect a cure.

O. Muck[2] gives a somewhat unique explanation as to the probable cause of sudden death in bathers, ascribing it to the caloric change in the labyrinth in open middle-ear cases. He cites a case to illustrate his belief.

A provisional diagnosis of syphilis that is well worth our investigation is that described by Beck.[3] He states that it occurs in about 80 per cent. of cases, and may be found where a negative Wassermann is had. Bone conduction is markedly shortened in syphilitics. The most conclusive evidence is that syphilitics in whom there is no impairment of hearing for conversational and whispered speech and for tuning forks show marked shortening of bone conduction.

Andrews,[4] in speaking of the use of blood clot in mastoid operations, concludes that normal human blood possesses bactericidal properties and that though this property exists after it is drawn from the vessels it diminishes in forty-eight hours.

NOSE

We find less literature concerning the nasal septum than in former years. Gleason,[5] "Indications for Correction of Deviated Nasal Septum by Gleason Method," recommends his operation as being preferable in patients under 15 years of age and in the aged and feeble. Another writer states that in examining members of a military command he finds about 20 per cent. of the men with enough symptoms to justify a resection.

Hay fever continues to receive due attention from various investigators. Laura J. Brown[6] recommends the use of the high-frequency current, claiming to have had uniformly good results. Koessler[7] states that hay fever is essentially an anaphylactic condition. By pollen experimentation he ascertains the susceptibility of an individual case. He then immunizes the patient by a vaccine from this particular pollen. He reports very few failures.

Gradle[8] reports the use of carbon dioxid snow in freezing the inferior turbinate instead of using the cautery. He speaks of it as being of especial value in intumescence.

Stucky[9] cites many cases of neuroretinitis, papillitis, choked disks, atrophy of optic nerve and exophthalmos as being due to intranasal and nasal sinus disease. He regards the middle turbinate as being the chief offender.

THROAT

The much-abused tonsil continues to occupy the front stage, though little that is new has been given us. That highly inefficient operation, tonsillotomy, is still being done, chiefly, however, by others than the otolaryngologists. Tonsillectomy is gradually being recognized as a major operation not to be lightly approached, and in no sense to be considered an office operation. The Sluder operation, and the dissection, followed by the snare, each have their defenders. Makuen[10] in a very interesting article declares defective speech is very frequently due to the fact that enlarged tonsils interfere with proper action of the palate.

Max Toeplitz[11] reports the result of his examination of some 500 delinquent boys as to the prevalence of adenoids and enlarged tonsils. The interesting feature of this work lies in the fact that an idea held by many was proven to be unfounded. The claim has been frequently made that tonsils and adenoids would disappear if the child had plenty of outdoor exercise. Three hundred of these boys were examined after a year of outdoor life under almost perfect hygienic surroundings; in only six cases had they disappeared, while four, not previously affected, had them.

Roberts[12] advocates the upright position in tonsillectomy, with ether as the anesthetic. His

chief reasons for using this position is better illumination and more perfect control of hemorrhage.

Shurley, speaking before the American Laryngological Association May, 1914, voices the opinion that affections of the ear, nose and throat have a marked influence on hyperthyroidism. He has seen beneficial results in symptoms of Graves' disease follow removal of diseased tonsils.

Berard, Sargenon and Bissiere[13] give an exhaustive review of the history, technic and results of laryngectomy. They urge that for all malignant tumors the operation should be radical and complete.

Houlie[14] states that syncope at time of operation and collapse after operation are possible accidents following laryngectomy. Syncope is probably the result of traction on the supralaryngeal nerve. He suggests the use of radium in the treatment of papilloma of the larynx.

In bronchoscopy, perhaps the greatest advance is the suspension method. All writers using this method agree as to its many advantages.

Ingalls-Friedburg[15] report three cases of fluoroscopic bronchoscopy.

One would anticipate a very large number of discussants of the pituitary body, but the literature on this subject does not come up to one's expectations.

Simpson[16] reviews the recent research along this line. He states that pituitary extract acts on the muscular portions of the heart and blood-vessels independently of the blood-supply. He further states that injection of the posterior lobes with suitable solutions have had a stimulating effect on the mammary glands.

Sauer,[17] in speaking of the endonasal route of attack in hypophyseal tumors, says the risk of inducing infectious meningitis is comparatively slight if the middle turbinates are not removed. He further advises the use of hexamethylene, 60 gr. in twenty-four hours, one day preceding the operation and for some days following. He states that the mortality following the Hirsch operation is 8.1 per cent. as against 13.7 per cent. by other methods.

Freystadtl[18] makes a good suggestion in the matter of the use of the Roentgen ray in photographing the sphenoidal sinus; introducing the holder containing a small film into the nasopharynx, directly in front of the sphenoid openings, and with the rays projected into the vertex.

The treatment of hemorrhage following certain of our operations is still being widely discussed, the most notable addition to our therapy being the serum treatment. Occasionally we find one who continues to endorse calcium chlorid as the prime requisite in control of severe hemorrhage; again, we find some who have something new to offer, e. g., Harrison, Detroit Otolaryngological Society, Feb. 17, 1914, details his experience in the control of hemorrhage by using a saturated solution of alum intravenously. He cites three cases of very severe hemorrhage which were thus controlled. It would seem that this treatment might well be borne in mind and at least used as a dernier resort.

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THE STATE BOARD OF HEALTH

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The State Board of Health was created by a law passed in 1881. This law was written and its enactment secured by the Indiana State Medical Association. From a department of the state charged with the advisory care of the public health with little power and money, the board has grown to be a bureau of the state government, employing nine experts as heads of divisions, with clerks, inspectors, chemists and other employees. The divisions are executive, accounting, vital statistics, food and drugs, water and sewage, weights and measures, cold storage, bacteriological and pathological, Pasteur Laboratory.

For this report a brief résumé of the work done by each division will be given.

EXECUTIVE

The executive is the secretary of the board and executes the orders and policies of the board. He appoints all employees with the consent of the board and directs the general

policies of the various departments. According to the law, he gives his whole time to the duties of his office. He cannot practice medicine or engage actively in any private business. The correspondence of all departments is about one sack of mail each day. The outgoing mail averages a little more than one mail sack per day. The correspondence of the executive averages twenty-five letters each day. "Hearings" with citizens and officials from all parts of the state and covering every phase of public and private hygiene occur daily. Not a day passes but at least five "hearings" are held. These are in regard to the very important matters of school hygiene, medical school inspection, municipal, community and domiciliary sanitation. These questions involve the health and lives of the people, and, of course, also our efficiency, wealth and happiness.

In the year just past the secretary made fifty-five visits in the state in answer to invitations from local officials and from citizens. In every instance the object was to secure better sanitation, make special inspections and to give public addresses upon disease prevention and the public health.

VITAL STATISTICS

Without vital statistics public-health work must be purely empirical. They furnish the basis for practical scientific endeavor for preventing disease. They also supply information of great importance to medical science, aside from the preventive-medicine aspect. Vital statistics have been termed the bookkeeping of humanity. Without them we cannot know the social latitude and longitude of a people upon the sea of time.

The vital statistics law of the state is approved by the state medical association and is a measure with few faults. It commands the reporting of births within thirty-six hours after occurrence, for, if this matter, which is so highly important to the parents, the child and the state, is put off even a little while, it is very liable to be forgotten. The law commands the immediate reporting of deaths. A dead body cannot be legally buried without a burial permit and said permit shall not be issued unless the health officer holds in hand the death certificate. These laws are conscientiously observed by all first-class practitioners; their cooperation being cheerfully accorded.

The statistical department annually receives, tabulates and analyzes reports of 70,000 births, 36,500 deaths, 29,500 marriages and 100,000 cases of contagious disease. The statistical report shows seventeen tables, carefully constructed and setting forth facts of deep importance to the people and the state. The total number of deaths for 1913 was 36,710, making a rate of 13.2. This number, by the averages before us, will be a little less for 1914. The death-rate of Indiana is very low, averaging well with her sister states. The medical profession may have pride in the mortality statistics of the state, but it is with deep regret we have to say this is not true in regard to the birth statistics. There are all too many doctors who do not understand and feel their responsibility to their families, to the state and to medical science, and in consequence they fail in birth reporting. In a few instances physicians have been so greatly remiss in this matter that an appeal to the law became necessary. In every instance where suit has been brought for violation of the registration laws, judgment has been secured against the delinquent. The State Board of Health invites physicians who have interest in the matter of life and death in our state to review the statistics its reports present.

MEETINGS OF THE STATE BOARD OF HEALTH

One new member was appointed to the state board during the year. Dr. J. L. Freeland of Indianapolis, formerly superintendent of the Indianapolis City Hospital, became a member of the board early in the year. During 1914 the board held four regular meetings and six special meetings, all members being present at every meeting. At these meetings forty-seven schoolhouse surveys, made upon petition of the patrons, were considered and all of them condemned. The law requires the State Board of Health to condemn all schoolhouses which are insanitary and to make sanitary inspections of all schoolhouses for which the patrons make petitions. During the year the State Board of Health, according to the statutes, ordered the sanitary disposal of sewage for Indianapolis, Lebanon and Brazil and ordered filtration of the water-supply in New Albany. The amount of detail work done was considerable and will be set forth in full detail in the report of the board.

WORK OF THE FOOD, DRUG AND WATER LABORATORIES OF THE STATE BOARD OF HEALTH FOR 1914

FOOD LABORATORY

During the year, 1,810 samples of food collected by inspectors or sent in by health officers or interested consumers have been examined at the laboratory. Of this number, 1,371 samples were legal and 439 illegal, either because they

contained ingredients not allowable under the law, such as chemical preservatives, foreign colors or makeweights, or were misbranded or otherwise mislabeled. The percentage of adulteration of foodstuffs as shown by the year's work is 24.25. Upon this basis of comparison the results reported for the year are no improvement over preceding years. This showing should not be taken as evidence that adulterated foods are common in our markets. The inspector sends in only such samples as he believes to be illegal, instead of, as he once did, sending in miscellaneous samples, confident that many of them would prove to be adulterated. As a matter of fact, the illegal samples are chiefly found in such foods as milk, where the fault is usually that of the presence of dirt; of vinegars, most of which are submitted by farmers who wish to know whether their product is sufficiently matured for sale; of beers sold as temperance beverages, but in fact, containing sufficient alcohol to deny them that distinction, and of ciders, sodas and pops, carelessly labeled as to the presence of artificial color.

DRUG LABORATORY

For several years the work of the drug laboratory has been confined largely to the examination of samples sent in by physicians or other interested persons. Most of the work of the past year has been special work, such as is shown in the report concerning medical frauds, and in the examination of series of samples of carbolic acid, aspirin tablets, paregoric and spirits of camphor.

WATER LABORATORY

Of the 1,645 samples of water analyzed during the year, 702 were collected from so-called shallow wells, 656 from deep wells, 96 from streams, 84 from springs, 48 from cisterns, 27 from lakes and ponds and 32 from miscellaneous sources not otherwise recorded. One thousand three hundred and forty-two of these samples were from private wells. Three hundred and three samples were from public supplies. Of the total number examined, 1,021 waters were reported as good, 414 as bad and 210 as doubtful. In percentage terms, 62 per cent. of all of the waters examined were of good quality, 25.1 per cent. bad and 12.9 per cent. as doubtful. These figures show a slight improvement over those of other years in that the percentage of good waters is but little higher.

Of the private water-supplies examined, 509 were taken from deep wells, 684 from shallow wells, 48 from cisterns, 69 from springs and 32 from miscellaneous sources. Seven hundred and sixty-seven of all the samples examined were potable, 381 were condemned as bad and 194 were classed as doubtful. Of the 509 deep well waters analyzed, 426 are furnishing water of good quality, 36 were reported as bad and 47 as doubtful.

Of the 684 shallow wells, however, but 246 furnished potable water; 308, or almost 50 per cent., were unqualifiedly bad and 130 were doubtful.

Of the 303 public supplies examined, 147 were taken from deep wells, 18 from shallow wells, 96 from streams, 27 from ponds and lakes and 15 from springs. Of the 147 deep wells examined, 142 were good, 3 were bad and 2 were doubtful.

SANITARY INSPECTIONS

During the year 417 cities and towns with a total population of 1,285,212 were visited. Many places were inspected several times and a large number of inspections made in the course of special work are not recorded in the list. The data referred to by no means represents the service given. The cities and towns visited are trading centers and supply not only their own population, but the people throughout the adjoining country. It is safe to say that the food supply of 90 per cent. of the residents of the state is under the supervision of the inspectors.

Twelve thousand one hundred and six places were visited during the year. One hundred and forty-seven reports gave a grade of excellent to the places visited. Six thousand, two hundred and seventeen, or 50 per cent. of all the places visited, were in good condition; 5,067 were rated as fair, 547 poor and 128 as bad.

A study of conditions in the various industries is of much interest. Of the 444 dairies inspected during the year, but 1 received a grade of excellent and but 43 of the entire number, or less than 10 per cent., were listed as good, 129 were fair, 163 poor and 108 were bad. Although the dairy work was but 3.6 per cent. of the work done during the year, dairies contributed 83 per cent. of the total number of places reported as bad. In other words, while but 1 per cent. of all the inspections reported were listed as bad, 24 per cent. of all the dairies were so classed. This condition is wholly unsatisfactory and it is to be doubted whether it can be controlled by state inspection. The improvement so necessary to a satisfactory milk supply cannot be forced by legislation. It must come from within the industry and it

must come as a result not of legislation, but an appreciation of the responsibility the milk producer assumes when he undertakes to provide a food supply for so large a percentage of the population.

Of the 4,611 grocery stores inspected, 80 were rated excellent, 2,468 as good, 1,967 as fair, 89 poor and 7 bad.

Of the 1,796 meat markets visited, but 14 were in excellent condition, 989 good, 743 were fair, 47 were poor and 3 bad.

As usual, drug stores are for the most part satisfactory. Of the 1,056 visited, 15 were in excellent condition, 830 were good, 208 fair and but 3 poor.

Twenty-two of the 1,591 bakeries and confectioneries inspected were rated as excellent, 866 as good, 648 fair, 52 poor and 3 bad.

Seven of the 1,529 hotels and restaurants were in excellent condition, 609 were good, 819 fair, 92 poor and 2 bad.

PROSECUTIONS

The table attached shows the results of the work of the departments in the courts of the state. In every case where an affidavit was filed alleging violation of the pure food or drug or sanitary food law a conviction was obtained.

PROSECUTIONS—TABLE SHOWING CHARACTER AND NUMBER OF CASES

Character	Number
Dirty milk and cream	8
Milk containing added water	4
Milk and cream below standard	4
Exposed foods	7
Maintaining unsanitary conditions	11
Ice cream below standard	1
Misbranding soft drinks	2
Misbranding beverage	7
Cider containing benzoate of soda	1
Benzoate in catsup	1
Short-weight potatoes	1
Adulterated food	1
Adulterated lard	1
Adulterated butter	1
Rotten eggs	2
False advertising	1
Grape juice containing sulphites	1
Misbranded food stuffs	3
Misbranded drugs	2
Drugs below standard	3
Cereal in wiener sausage	1
Starch in sausage	1
Salicylic acid in pop and soda	1
Misbranded vinegar	1
Total	66

SPECIAL WORK

Not included in the above summary is a very comprehensive study of the effect of bread wrapping on the composition of the loaf. This work started more than a year ago by Mr. Bishop is by far the most elaborate investigation of the kind ever undertaken and has been accepted as authoritative on the subject.

During the summer of 1914 a sanitary survey has been made of the city of Vincennes. This survey included an inspection of the premises of every house in Vincennes, an analysis of all well and cistern waters and an investigation of the sanitary conditions of toilets and outhouses. In the course of this work, complete analyses, both chemical and bacteriological, were made of water samples collected from three thousand sources. It is impossible yet to determine the value of this survey to the citizens of Vincennes, but enough improvements have already been instigated and bad conditions corrected to establish beyond question the great value of special work of this character.

BACTERIOLOGICAL AND PASTEUR LABORATORIES

The growth of the work of the laboratory this year has been a healthy one along all lines; however, there has been no extraordinary increase in any one line of work.

Altogether, 21,000 specimens were examined.

There has been a steady demand for typhoid vaccine. More than ten thousand doses were sent out.

Two hundred and thirty persons have been treated to prevent rabies.

The large number of specimens examined, the typhoid vaccine prepared and sent out, the 15,000 tubes of Loeffler's blood-serum made and the 24,286 outfits made up and sent out have necessitated a good working force and diligent labor to accomplish the work demanded.

Although we examined ten times the number and kind of specimens done in 1906, our first laboratory year, we have no more working space. Our crowded quarters make our work extremely difficult.

The following is a brief summary of the work done by the laboratory this year:

TOTAL SPECIMENS EXAMINED AND REPORTS RENDERED 22,000

Sputum for tubercle bacilli	4,947
Blood for Widal typhoid	1,603
Blood for Widal paratyphoid	1,148
Blood for malaria	139
Throat cultures for diphtheria	5,314
Epidemic diphtheria	5,750
Pus for gonococci	691
Pathological tissues	365
Brains for rabies	311
Other specimens	1,732
Total	22,000

Doses of typhoid vaccine sent out	10,500
Pasteur treatments	230
Mailing outfits for specimens	24,286

There is no disease that can so well be controlled by laboratory examinations as diphtheria. It is very evident that full advantage is not being taken of the facilities offered by the state laboratory.

During the year 1913 there were reported 496 deaths from diphtheria, and 4,077 cases. Of the 5,675 specimens sent in for first diagnosis, only 1,746 were found to be positive. Therefore, less than one-fourth of all cases of diphtheria are diagnoses by the state laboratory.

Of 833 positive diagnostic cultures, only 54 per cent. were released upon second cultures. From the above estimations it is safe to say that in only about 10 per cent. of cases is there a legal laboratory control of release from quarantine.

In this one disease alone full-time health officers are indispensable for proper control of epidemics.

Epidemics of rabies among domestic animals continue. Brain positives for rabies were received from fifty-one counties.

Patients from thirty-six counties were given the Pasteur treatment.

Thus far, 552 patients have been treated by the State Board of Health. Of these, two have died, giving the State Pasteur Institute 0.37 per cent. of failures; the usual percentage of failures being about 0.5.

INDIANA UNIVERSITY SCHOOL OF MEDICINE

Charles P. Emerson, M.D.
INDIANAPOLIS

Indiana University School of Medicine began the present school year under the most favorable conditions. In the upper three classes at Indianapolis there are 106 students and in the first year class at Bloomington, 50. Each year since the requirements for admission were raised there has been a steady gain in the matriculation. It is in the premedical registration, however, that the gain is most remarkable, for in the arts department of Indiana University at Bloomington are 148 pupils taking the premedical courses who expect to enter the medical department within the next two years, while also in the other colleges of Indiana the number of premedical students is larger than ever. Some of these students will probably go to other medical schools, and others, because of their work, will not be permitted to matriculate in the medical department; yet it is quite evident that in the next three or four years the limit of the capacity of our present medical equipment will be reached. It is a very gratifying fact that an increasingly large percentage of the Indiana boys who are studying medicine are doing so in their own state university. Ours is now among the largest of the A + medical schools and has gained a reputation of which we may well be proud.

The modern medical course consists of three periods, each of two years' duration: the premedical period of at least two years, the two years for the study of the medical sciences, and two years of "practical" work. Soon, without doubt, an additional year of hospital work will be required for the medical degree. Of these six years the first two of premedical college work are as important as any. It is then that the student lays the foundation for his future as well as his present training. Almost every one of the medical courses of a good school as now given would be "Greek" to one who had not had the required amounts of chemistry, biology and physics. But more than this, medicine is a profession advancing so rapidly that the knowledge with which a student is graduating will suffice but for a very few years. To keep abreast of the times, that is, to be able to give his patient the best which medicine has to offer, a doctor must grow not only in his technical skill and in his ability to handle men, but also must change along with the leaders of his profession. This means a constant shifting of his point of view, the rejection of some ideas and methods and the adopting of new. It would be possible without these preliminary two years to give the student during the medical course sufficient foundation in science for medical practice as it exists at the time of his graduation; but in a very few years he would be unable to understand or use the better methods. The "pressure points" of his practice are ever shifting, hence the need of a broad base of foundation sciences of medicine. The following is the premedical course as given at Bloomington, but this work can be done at any good college.

FIRST OR FRESHMEN COLLEGIATE YEAR
(PRE-MEDICAL)

Fall Term	Hrs.	Winter Term	Hrs.	Spring Term	Hrs.
Zoology	5	Zoology	5	Genl. Chemistry	5
German	5	German	5	German	5
Physics	3	Physics	3	Physics	3
English (7)	2	English (7)	2	English (7)	2
Hygiene	1	Hygiene	1	Hygiene	1

SECOND OR SOPHOMORE COLLEGIATE YEAR (PRE-MEDICAL)

Fall Term	Hrs.	Winter Term	Hrs.	Spring Term	Hrs.
Qual. Analysis	5	Qual. Analysis	5	Organic Chem.	5
German	5	German	5	German	5
Philosophy	5	Physics	2	Embryology	5
		Elective	3		

Of these premedical subjects, chemistry is by far the most important. One reason for this is that the latest advances in medicine have followed advances in chemistry, and another is that chemistry is a very difficult subject to study outside of a well-organized college laboratory. Also a knowledge of comparative anatomy, especially of comparative histology and embryology, is indispensable for the proper study of the human body.

The first year of the medical course is emphasized at Bloomington, although the university stands ready to give this work in Indianapolis also, should a sufficiently large number of students apply to justify the duplication of these courses. In this year anatomy, physiology and chemistry are the main studies and the work is chiefly in the laboratories.

Freshman Year—	Lectures	Laboratory	Total Hours
Anatomy	63	597	660
Physiology	90	170	260
Chemistry	60	120	180
Total	213	887	1100

The second year is given only at Indianapolis.

Sophomore Year—	Lectures	Laboratory	Total Hours
Pathology and Bacteriology	146	594	740
Pharmacology, Materia Medica, and Toxicology	73	172	245
Applied Anatomy	33	...	33
Physical Diagnosis	11	55	66
Topographical Anatomy	55	...	55
Total	318	821	1139

This year is spent almost entirely in the laboratories of bacteriology, pathology and pharmacology. Practically no didactic lectures are given, the hours thus scheduled being spent in demonstrations and in discussing the results of the laboratory periods. Courses in applied anatomy, materia medica, bandaging and physical diagnosis introduce during this year the student to the more practical subjects of medicine.

During the third, or junior year, the mornings are spent in the City Dispensary, the afternoons in the laboratories and classrooms.

Junior Year—	Lectures	Laboratory	Clinics	Total Hours
Pathology	22	...	...	22
Therapeutics	66	...	...	66
Medicine	242	132	276	650
Surgery	142	107	210	437
Obstetrics and gynecology	77	...	...	77
Dermatology and syphilology	22	...	...	22
Total	571	239	486	1274

The dispensary is open each week-day morning from 8 until 10 o'clock. The students during this year work in the general medical, general surgical, nervous and mental, and skin departments. They take the histories of the patients, examine them under supervision, assist in the minor surgical operations, and learn the use of the various instruments used in diagnosis. At 10 o'clock the entire junior class meets with one of the clinical professors in conference over some of the interesting cases of the morning. In addition to the lecture quiz and demonstration courses, two afternoons a week are spent in the clinical laboratory in the examination of the blood, urine, gastric contents, sputum and serum, practicing the methods of clinical diagnosis and studying interesting specimens from the dispensary or hospitals; and two afternoons a week are spent in surgical pathology, examining tissues removed at operations.

During the fourth year the students in groups divide the mornings between the City Hospital, the Robert W. Long Hospital and the City Dispensary.

Senior Year—	Lectures	Laboratory	Clinics	Total Hours
Medicine	176	24	365	565
Surgery	176	20	163	359
Obstetrics and gynecology	66	18	84	168
Eye, ear, nose and throat	55	...	90	145
Dermatology	11	...	49	60
Therapeutics	..	...	33	33
Total	484	62	784	1330

At the City Hospital the students see as many cases as possible; at the Robert W. Long Hospital they study fewer cases more thoroughly, they themselves being responsible under supervision for the histories, all clinical reports and records, and are required to be present and if possible assist at all examinations of the cases assigned them. At the City Dispensary they work in the departments of the specialties. One afternoon a week is spent at the Central Hospital for the Insane, where are given lectures, pathological demonstrations and clinics on the important forms of insanity. Other afternoons are spent in experimental surgery, in practical surgery, and in practicing on mannikins, the students in groups doing this work themselves. The lecture courses are designed to fill up the gaps in subjects which cannot be covered in dispensary, hospital or laboratory.

The four years' course is reckoned as about 4,800 hours in length, or about 1,200 hours per year. As in the evolution of all medical schools didactic work is fast being replaced by

demonstrations and practice courses, in the hospital wards even the bedside lectures are becoming more and more student demonstrations. That is, the professor now talks little to the students grouped about the bed, but the student to whom the patient was assigned demonstrates to the professor and the students the case, its history, the results of examinations, while the teacher discusses briefly these results and makes suggestions concerning further investigation. The student now is not only shown how to examine a patient, but is required to practice until he can do it well, for the acquisition of correct methods is of far more importance than pages of text-books committed to memory. Physical and laboratory diagnosis require considerable practice if the results are to be accurate. The music teacher, for example, can show the pupil how to play the piano, but no amount of demonstration can make a good player unless the pupil is willing to practice long. The same is true of percussion, e. g., the student should practice just as faithfully as does the music pupil. It is desirable that the student should know the significance of enlargement of the spleen, but it is still more important that he should be able to tell accurately whether in a given case the spleen is palpable or not. It does a student little good to know the meaning of sounds in the chest which he is unable to hear. In this way the medical courses are becoming more and more practical in the sense that the student is made to do the work himself under supervision, and his work is graded quite as much on his technic as on the amount of information which he has committed to memory.

Universities now are beginning to appreciate that they have a very definite responsibility toward the public for their graduates, and that this responsibility concerns the morals of the young doctor as well as his professional training. The university owes it to the state that no man of loose or of questionable moral character receive a medical diploma, and that the recent graduate be a "safe" general practitioner. This responsibility is especially heavy during this young graduate's first four or five years of practice. After that time the responsibility for his education will in large measure rest in his own hands. He can educate himself further or can take postgraduate courses. The young doctor just graduated, or after one year of hospital service, is not expected to perform a major operation or start independently in any specialty. He is expected to be safe in general practice, to care well for the ordinary diseases, to perform well minor operations and to attend skilfully cases of normal labor. Furthermore, he is expected to know the limitations of his ability and when to call for more expert assistance. With this in view the students spend less time watching the more difficult work (although they should see enough to know the very best that can be done) and more time practicing to do the common tasks well. This is the main reason why some schools now require a hospital year before graduation.

And, finally, the university should provide for the further education of its graduates, for every five years each graduate should return for a few weeks at least for further study. Indiana University School of Medicine stands ready at any time during the year to give postgraduate courses to those physicians of the State of Indiana who so desire. Courses can be arranged for in bacteriology, pathology, clinical diagnosis, surgical diagnosis and physical diagnosis, as well as in the clinical subjects. We invite the profession of the state to examine the advantages which we can offer in this work.

If you have the slightest appreciation of The Journal, show it by patronizing the advertisers, for the advertisers must receive your patronage in order to justify them in continuing their advertising, and The Journal must have the advertising in order to exist. You, appreciative reader, may not know that for the year 1914 the publication of The Journal cost nearly one thousand dollars more than it has cost for any preceding year, and yet such is the case, and the increased cost is coming from the advertising income and not from what you have been paying as a subscription. To neglect or to refuse to patronize advertisers would mean to cut down our income, and to cut down our income means to publish no journal, or, at the most, a journal that is not worthy of the name. We do not like to harp on this subject all the time, but we are forced to do so, as we realize that the ordinary doctor is a thoughtless and unsympathetic sort of a cuss out of the sick-room, and while he means well he usually has to be stirred to action with a sharp stick if his help is wanted outside of professional duty.

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EDITORIALS

PROPER DOSAGE OF DIPHTHERIA ANTITOXIN

As this is the diphtheria season and the disease is prevalent in many communities in Indiana it may be well to call the attention of our readers to the late discussions on the proper dosage of diphtheria antitoxin. Heretofore many clinicians have urged the employment of very large doses of antitoxin in the treatment of diphtheria, and insisted upon not only early use of the remedy but repeated injections. Later investigations and experiments seem to show that the enormously large doses of antitoxin, with their accompanying expense to the patient, are unnecessary. In connection with this subject we quote the editorial comments of *The Journal A. M. A.* on the paper of Dr. W. H. Park, read at the last session of the American Medical Association, which dealt with his experience with Schick's test and some later studies of Schick concerning the dosage of diphtheria antitoxin in the treatment of diphtheria patients, as recently reported from Von Pirquet's clinic in Vienna. The comment of *The Journal A. M. A.* is as follows:

"In the treatment of human diphtheria, therefore, Schick and his colleagues recommend (1) that the injection be given at the earliest possible moment; (2) that it be given intramuscularly; (3) that in all mild and medium cases of diphtheria (and these make up about 90 per cent. of all cases) a single dose of 100 units of antitoxin per kilogram suffices, and (4) that in the severest cases 500 units per kilogram may be injected. In other words, in a child weighing 20 kg. (or 44 pounds), 2,000 units will, in 90 per cent. of the cases, suffice, while in 10 per cent. of the cases of the most severe type a dosage of 10,000 units may be given. In an adult weighing 60 kg. (or 132 pounds) a dose of 6,000 units will suffice in all ordinary cases, whereas in the severest cases a single dose of 30,000 units may be given.

"One of the most important of Schick's observations is that repeated injections of the serum are superfluous and not warranted. Even in the severest cases, he asserts that if a dose of 500 units per kilogram be injected immediately the greatest good possible will be obtained. Subsequent injections of antitoxin after six, twelve or twenty-four hours are, he maintains, unnecessary, for any further effect of toxin is prevented by a single dose of the size mentioned. If the diphtheria patient dies, it is because the toxin elaborated by the organisms in his body has had time to act before the antitoxin was injected, and cannot by any means as yet known to us be afterward inactivated. The only circumstance in which a second injection is of value is when the first injection given has been smaller in dose than the optimal doses recommended; then one may give a single dose of 500 units per kilogram.

"In exposed persons requiring a prophylactic immunizing dose, a single injection of 50 units per kilogram is sufficient.

"If the conclusions drawn by Schick and his colleagues from these interesting studies be correct, it is obvious that the practitioner will, from now on, be provided with a precise method of treating diphtheria patients hitherto much desired. It would appear that the enormous doses sometimes given of 100,000 units, or more, of antitoxin are wholly unnecessary, involving large expense and much inconvenience to the patient, especially where repeated injections have been given. One would, of course, not shrink from the expense or from the inconvenience, could a single life be saved thereby; but Schick's studies seem to indicate that in most cases 100 units per kilogram, and in a few severest cases 500 units per kilogram, given in a single dose, yield the maximal protective effect at present obtainable."

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

YOUR dues are delinquent on the first of next month. Pay up.

OWING to the large amount of space taken up by the special articles in this number, some of our editorials and editorial notes for January have been carried over to the February number of THE JOURNAL.

REMEMBER that Medical Defense ceases on the first of next month if your Association dues are not paid by that time. If you have not received your membership card from Secretary Combs, then your dues have not been received by the Association.

WE recently have received a newspaper clipping giving an abstract of a speech before newspaper men in which Dr. J. B. Murphy is cited as "a successful newspaper advertiser." Ye small fish who are nibbling at the publicity bait can take comfort from the fact that you are not the only ones seeking publicity and business through the medium of the lay press.

With the beginning of the new year it is not a bad policy for every doctor to reread the Principles of Medical Ethics. Some of us may not need the code of ethics, but as a usual thing the fellow who thinks his conduct so exemplary is the one to be watched.

We are especially pleased to publish in this number of The Journal a report of the State Board of Health concerning work for the year 1914. The report shows that the board has been especially active in a variety of ways, and the state should be proud of what has been accomplished under the guidance of Dr. Hurty and his force of experts at the heads of the different activities.

At this session of the Indiana legislature an effort will be made to secure pensions for several different classes of employees. This pension graft is getting to be a serious proposition, and yet organized effort seems to "put it through" with striking regularity. If the doctors were better organized and worked more in harmony perhaps they too could get pensions—and the Lord knows the most of them need financial help.

The old custom of making calls on New Year's day is being revived. It might not be amiss for some of the younger physicians to follow the professional custom to call on the older physicians and those of longer residence in the locality. This applies with especial force to the newcomers who should announce their arrival and the desire to be recognized in professional circles and friendships by getting acquainted with the older physicians.

In these strenuous days practically every doctor drives an automobile. Therefore he must purchase automobile tires, chains, robes, tools and accessories of every description. The editor of The Journal, as a rule, is rather hesitant about giving his personal recommendation of anything, but from his own actual experience in saving money he feels justified in recommending his medical friends to join the American Motor League.

The secretary of the Lake County Medical Society offers some pertinent suggestions for 1915 which we believe are worthy of reproducing in The Journal. Among other things he says:

Boost your membership! Resolve to attend at least one-half of the meetings. It will do you good and also help organized medicine. See if you cannot see something good in your fellow-practitioners. They are not such bad fellows once you come to know them. Report your successes and failures as well. The man who never made a mistake is a poor doctor.

We venture to say that many of our readers are not familiar with the work that is being done at the Indiana University School of Medicine, and to such we recommend the reading of the article by Dr. Charles P. Emerson, dean of the medical school, published in this number of The Journal. The Indiana University School of Medicine is an A + school which is constantly improving the character of its work, and only needs adequate financial support from the state to make it an institution second to none of the medical schools.

Dr. Hurty wants some new legislation to assist him in his public health work in Indiana. He wants an all-time health officer law and some decided alterations in existing public health regulations. Well, Dr. Hurty ought to know what he wants and what is good for us for he has been studying this question for a good many years and his opinion on public health matters carries weight from one end of the country to the other. In fact, Indiana should be proud of Dr. Hurty and give him most anything in the line of reason that he wants. Some other states would be very glad to have him and would give him much more than he gets in Indiana.

Warm-Hearted America is responding liberally to the cries of distress in Belgium. The medical profession has been asked to contribute to the relief of those medical men in Belgium who have lost not only all their worldly possessions but the opportunity of reestablishing themselves in practice at their old homes where the devastation of war has pauperized the community. Those of our readers who are charitably disposed can find no better place for extending help than to our suffering professional brothers in Belgium. Donations of money, surgical instruments, or medical books will be appreciated, but for the present money contributions only are accepted and should be sent to Dr. F. F. Simpson, treasurer, Jenkins Arcade Building, Pittsburgh.

January First is the time for swearing off bad habits, but it takes an even-tempered doctor to avoid profanity on the first of the year when he looks over his ledger accounts and finds the names of so many "dead beats" as his

patients. It really is peculiar how free the average doctor is in affording his services to those who can pay but do not. But then, they say there are a great many doctors who are "dead beats," and perhaps doctors learn the trick from their "dead beat" patients. However, because one man abuses all the laws of confidence, courtesy, and honesty, is no reason why another man should do likewise. The doctor who is slow pay or does not pay his bills at all has no legitimate cause for complaint if his patrons treat him as he treats others.

WHEN the Foot-and-Mouth disease struck Indiana it was surprising how quickly the national, state, and county societies adopted means and measures for stamping out the disease and paid no attention to the cost in dollars and cents. While it is known that the Foot-and-Mouth disease is not necessarily fatal to even a majority of the animals attacked by the disease, and some animals even escape the disease when exposed to the infection, yet the loss to the farmers was considered sufficient to justify any trouble and expense to stamp out the disease. We venture the assertion that not one-tenth as much money is expended in stamping out or controlling diseases that are every bit as fatal to human life as is the Foot-and-Mouth disease to domestic animals. But then, human beings are not worth very much when compared to cattle and hogs.

THE question of Industrial Insurance will be considered at this session of the Indiana Legislature. Medical men should join with the labor organizations in an attempt to secure a law that is eminently fair to employers, employees, and doctors. Let us not make the mistake made by doctors in some states by paying no attention to proposed legislation along this line, only to find later that through our own fault no provisions have be n made for adequate compensation for the doctors who take care of industrial accidents and are paid for such services by the state. Ohio has an excellent law, but Indiana can improve upon that. The matter is of vital importance to every doctor, and we caution our readers to keep a close watch upon proposed legislation, and in particular to get in touch with the committee before whom such a bill must appear.

INDIANA DOCTORS SWINDLED!—Nothing particularly new about this announcement, for it recites a fact of common occurrence. However, a former salesman of W. B. Saunders Company, by the name of E. H. Chappel, is soliciting orders for the Saunders' publications and collecting money for the same. We are advised that this man Chappel is no longer in the employ of the Saunders Company and that he is not authorized to take any order or make any collections in the name of the Saunders Company. In this connection we desire to emphasize a statement that has been made again and again in the columns of THE JOURNAL, *never pay any money to agents, no matter what the representations.* If you really desire to make any sort of payment to an agent or collector, then make your checks payable to the firm for whom the money is intended, and under no circumstances make it payable to the agent or bearer.

DR. ADOLPH GEHRMANN, president of the Columbus Medical Laboratory, in a circular to his colleagues, says that he believes that the advertising of laboratory fees is wrong. And what he says concerning the laboratory work as a specialty will apply to any branch of medical service. He states that some of the advertisements of laboratories are not in accord with good taste or good judgment, and that they will everlastingly redound to the detriment of the profession. The plea is made that the medical laboratory supplies service and not commodities. Professional service demands personal attention given at the moment, special skill, and proper facilities. The pay for such service is a fee. Commodities can be produced at leisure, placed on the shelves and moved by prices governed by supply and demand. The specialist feature of laboratory work grows with the personal attention given to the same and one's special ability, until it becomes an established division of our medical activities. When we accept laboratory work as a professional specialty the fees for such service must vary according to the standards that those engaged in it may set for themselves. Every professional man has the privilege of his fee. This professional fee cannot be judged in value except by the giver and receiver of the service. When an attempt is made to shrink the range of fees beyond a reasonable latitude we do both the professional man and his client harm, and it is the same in relation to all professions. Therefore, we hope that the practice of advertising fees of any description will be frowned upon by the medical profession as a whole and in

particular by those medical men who are designated as specialists in any branch of medical work.

This is the season of chapped hands, and the doctor who washes his hands frequently suffers among others. Therefore it may be appropriate to give some suggestions concerning the prevention of chapping and irritation of the skin as offered in a recent number of *The Journal A. M. A.* The chief reason for chapping of the hands is the lack of fat in the skin in cold weather. The dry air of winter makes the skin dry and vulnerable at the very time when the cold air is itself irritating. This combination readily leads to chapping if the hands must be exposed much to soap and water, and particularly if the irritation of antiseptics is added, as in the case of physicians and nurses. The first thing to do to prevent or overcome the condition is to supply, by greasing the skin occasionally, the lacking fat in the skin. Nothing is better for this purpose than a well-made cold cream. The next and more difficult thing to do is to avoid soap and water, especially soap, as much as possible. It is here that hand lotions serve a very useful purpose. A formula for such a lotion, given by Pusey, is as follows:

Tragacanth	gr. lxxx
Glycerin	℥ ss
Boric Acid	℥ ss
Water ... q. s.	Oi
Oil of bergamot	♏ iv
Oil of lavender	♏ ii
Oil of rose	♏ i

The oils mentioned being added as a perfume might be omitted, one or all of them, according to the wish of the prescriber. The boric acid, glycerin and water are first mixed, the tragacanth added and the mixture agitated until the tragacanth is dissolved. This makes a rather thick mucilage; it can be changed to any consistency desired by slight increase or decrease in the amount of tragacanth. A lotion like this has a considerable detergent effect; it is a tolerable substitute for soap, and if it is freely rubbed over the hands and wiped off, either with or without the use of water, cleans the skin of all but the most tenacious dirt. It, of course, cannot be effectually used as a complete substitute for soap. Such a lotion has the advantage over soap that it not only is not irritating to a sensitive skin but also is bland and soothing. It thus tends to prevent and eventually to cure chapping of the hands.

DEATHS

Ida F. Conway, wife of Dr. P. W. Conway, of Delphi, died December 30.

James E. Talbot, M.D., of Linton, died December 17 at the age of 66 years.

John E. Harrod, M.D., of Fort Wayne, died December 8 at the age of 53 years.

David C. Fouts, M.D., died very suddenly December 19 at his home in Georgetown.

Mrs. Hannah Vickrey of Tipton, widow of Dr. A. M. Vickrey, died December 24.

John T. Anderson, M.D., died November 30 at his home in Swayzee, aged 72 years.

Elizabeth Canady, aged 64, wife of Dr. W. T. Canady of Hagerstown, died December 25.

James Black, M.D., formerly of Wheatland and Monroe City, died December 9 at the age of 83 years.

John Parker, M.D., a practicing physician of Mellott for a number of years, died December 26, aged 67 years.

G. H. Burke, M.D., died at his home in Wabash December 4, after an illness of nearly a year, aged 51 years.

John M. Smith, M.D., for forty-six years a practicing physician and surgeon in and around LaFayette, died December 26 at the home of his daughter near LaFayette from a complication of diseases, aged 67 years.

John Borough, M.D., of Mishawaka, died December 31, aged 72 years. Dr. Borough was born in Wyandot County, Ohio, in 1843, and graduated in medicine in 1874, beginning practice soon afterward at Mishawaka. He was prominent in medical circles, the Masonic lodge and was a veteran of the Civil war.

H. C. Burcham, M.D., for many years a practicing physician of Richmond, but who of late has resided at Abington, died December 26 as the result of a stroke of paralysis which he suffered about a year ago. He was a member of the Wayne County Medical Society and the Indiana State Medical Association.

Moris Drake, M.D., died December 11 at his home in Shelbyville after an illness of several weeks. Dr. Drake was born in Putnam County March 5, 1856; his early years were spent in Ripley County and he was a graduate of Moores Hill College. In 1881 he graduated from the Ohio Medical College, Cincinnati, and immediately began the practice of his profession with his father at Shelbyville. At the time of his death Dr. Drake was secretary of the City Board of Health, and a member of the Shelby County Medical Society, the Indiana State and the American Medical Associations.

David J. Loring, M.D., died at his home in Valparaiso on December 29, aged 66 years. He had been in poor health for several years. Dr. Loring was born in Grant County, Indiana, in 1848, where he grew to manhood. In 1874 he entered the practice of medicine and studied at Cincinnati, Rush Medical College, Chicago, and Bellevue Hospital, New York City, specializing in anatomy and surgery. He first practiced his profession at Francesville, Ind., and in 1882 located at Valparaiso. Dr. Loring was prominent in the affairs of the profession, and was instrumental in organizing the first medical society in Porter County in 1883. At the time of his death he was secretary of the Porter County Medical Society, a member of the Indiana State and the American Medical Associations.

Marshall T. Shively, M.D., one of the best and most favorably known medical men in this part of the state, died at his home in Marion, Ind., Nov. 23, 1914, in the sixty-sixth year of his life.

The end came gently and peacefully as a result of cerebral trouble of several months duration, and although his relatives and friends had for some time abandoned all hope of his recovery the announcement of his death was received with unfeigned sorrow by an unusually large circle of friends and acquaintances whose confidence and respect as a man and physician he had enjoyed in full measure for many years.

His parents were among the early settlers of the county; and he himself lived to see the place of his birth grow from a country village to a beautiful and up-to-date little city—a result to which his own efforts contributed in no small degree.

Soon after completing his literary studies he entered the office of his father, Dr. James S. Shively, as a student of medicine, and in the spring of 1872 he received his diploma from the Ohio Medical College, of Cincinnati. Returning to his home city he immediately entered into partnership with his father, and for more than forty years thereafter was actively and continuously engaged in the arduous duties of a general practitioner of medicine, in which capacity he was distinctly successful—both financially and otherwise. Professionally speaking, he was a man of much more than average ability, and being naturally of a conservative disposition, he did not hesitate to condemn much of what he characterized as reckless tampering with the human body upon the part of certain faddists and experimenters. On the other hand, guided by his own high ideals as to the responsibilities of his mission in life, he was particularly careful and painstaking in his dealings with the sick or injured.

Dr. Shively became a member of the Grant County Medical Society upon his graduation from the medical school and for forty years was an active member. He served as president of this society and for fourteen years has been its treasurer. Such was his personal integrity and high sense of responsibility that he was often chosen for work wherein such qualities counted most.

In politics Dr. Shively was a democrat of pronounced type, who stood for clean methods, and a high standard of party management, and for years his advice and influence was sought by some of the most prominent workers in that organization. The wife of the deceased, whose maiden name was Zomora Bobbs, passed away some four or five years ago, and seven children—two sons and five daughters—remain to mourn their father's death.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Dr. and Mrs. C. F. Neu spent the holidays in Wisconsin and Canada.

Dr. Ada E. Schweitzer attended the American Public Health Association at Jacksonville, Fla.

Dr. A. C. Kimberlin suffered a badly sprained ankle the latter part of December on his way from Sullivan to Indianapolis.

Dr. Thomas L. Sullivan, Jr., has begun his duties as superintendent of the City Hospital, succeeding Dr. John W. Sluss who resigned to resume the practice of surgery.

The last meeting of the Medical Seminar for the medical department of the University was held December 4. Leaders: Drs. A. C. Kimberlin and Harry Langdon.

During the holidays the rooms occupied by the City Dispensary in the College building have been renovated and painted, thus adding very materially to the appearance of this department.

Dr. Louis Segar of the class of 1912, Indiana University School of Medicine, recently was chosen from a large number of applicants to fill the position of intern in the Children's Hospital, Boston.

The Indianapolis Pediatric Society has been organized with the following officers: Dr. James H. Taylor, president; Dr. E. B. Mumford, secretary. These meetings will be held monthly. The membership is limited to those interested in pediatrics.

The Indiana University trustees met at Bloomington, December 3, and made the following appointments for the medical school: Hospital: F. A. Morrison, David Ross and S. E. Earp; Dispensary: F. W. Cregor, J. A. McDonald and M. N. Hadley.

The City Board of Health has announced the new staff for the City Hospital for the coming year. The following changes have been made: Resignations, Dr. W. N. Wishard, Dr. John F. Barnhill, and Dr. John H. Oliver. Those added, Drs. Clarence R. Strickland, Leslie Maxwell, J. H. Cunningham, Frank Abbott, A. C. Weaver, Augustus L. Marshall, John W. Carmack, Frank Brayton, and R. C. Beeler.

Miss Anna Strong representing the Federal Bureau of Child Welfare addressed the medical society recently with the object of acquainting the physicians with a Child Welfare Exhibit to be held in the near future in Indianapolis. This exhibit has been held in some of the larger cities of the United States and it is expected to arouse great interest and result in an increase in interest on the part of the public in the subject of public health.

At the January fifth meeting the Indianapolis Medical Society elected the following officers for the year 1915: President, David Ross; first vice-president, Ada Schweitzer; second vice-president, George R. Coble; secretary-treasurer, Alfred Henry; judicial council, Edgar F. Kiser, Homer G. Hamer; state delegates, Ralph S. Chappell, J. V. Reed, Daniel W. Layman, G. B. Jackson; alternates, Arthur E. Guedel, E. A. Brown, W. F. Clevenger. The Indianapolis Medical Society has a membership of 320.

Friday night, December 18, the regular scientific monthly seminar of the medical department of the University was held at the Medical College. Those on the program were Professor Lindley of the department of psychology, who continued his series of lectures on the relation of psychology to the practice of medicine. These lectures by Professor Lindley are proving of great interest and of extreme practical value to physicians in the practice of medicine. There was also presented by Mr. Hare and Mr. Kime of the junior class necropsy reports of cases of acute hemorrhagic pancreatitis and melanotic sarcoma, the latter originating in a pigmented mole of the skin.

GENERAL

Dr. R. L. Lee, formerly of Newcastle has located at Lewisville.

Dr. John P. Black has removed from Indianapolis to Greenfield.

Dr. William R. Boggs recently moved from Salem to Indianapolis.

Dr. John T. Smith has removed from Charlottesville to Crawfordsville.

Dr. Joseph Gardner of Red Cross, suffered a stroke of paralysis December 10.

Dr. R. D. Morrow was elected coroner of Wayne County on the Progressive ticket.

Mrs. Kithcart, wife of Dr. N. I. Kithcart, Columbia City, has been very seriously ill.

Dr. Franklin Petry, formerly of Gary, has located at Lowell, for the practice of medicine.

Dr. Walter W. Gype, who has practiced for some time at Sheridan, has located at Greentown.

THE Sanatorium at Greenwood, owned by Dr. A. J. Craig, was destroyed by fire December 30.

DR. D. D. WIGGINS of Newcastle, is spending a few weeks at the Mayo Clinic, Rochester, Minn.

THE ninth annual meeting of the Second District Medical Society was held at Linton December 17.

DR. W. W. BARNETT of Fort Wayne, was married December 21 to Miss Irma Bogash of that city.

DR. O. P. M. FORD of Connersville, was recently appointed local surgeon for the New York Central Lines.

DR. HERMA A. BECK of Lebanon, underwent a surgical operation at the Methodist Hospital, Indianapolis, December 28.

DR. R. C. N. COOK, formerly of Pasadena, Cal., has located at Lebanon, and has offices in the Farmers' State Bank Building.

COUNTY COMMISSIONERS of Henry County have recently granted a petition for a $40,000 hospital to be erected in that county.

DR. F. M. MAGERS of Churubusco, has retired from active practice and is succeeded by Dr. E. M. Bennett from Indianapolis.

DR. C. P. COOK of New Albany, who was recently operated on for appendicitis at St. Edward's Hospital, is rapidly recovering.

DR. C. A. ROARK has recently moved from Milton to McCordsville, and Dr. E. M. Bennet of McCordsville, has located at Indianapolis.

THE annual banquet of the Allen County Medical Society was held at the Elks' Temple, Fort Wayne, with about sixty members present.

DR. GEORGE B. THOMAS of near Greenfield, who has been an intern at St. Anthony's Hospital, Terre Haute, has located at Hazel Dell, Ill.

DR. JOSEPH RILUS EASTMAN of Indianapolis, was elected president of the Western Surgical Association at a recent meeting held at Denver, Colo.

DR. W. M. BIGGER is a new physician at Hammond, having removed here from Pennsylvania where he has practiced medicine for a number of years.

DR. FRANK C. ROBINSON of Martinsville, was married December 19 to Miss Carrie Dillon of near Monrovia. They left immediately for Florida to be gone a month.

DR. W. A. HOLLIS of Hartford City, left the first of January for New Orleans, La., to do some post-graduate work in the Eye and Ear Hospital, Tulane University.

DR. CLAUDE B. PAYNTER, secretary of the Washington County Medical Society, recently moved from Campbellsburg to Salem where he will devote his time to surgery.

THE St. Joseph County Medical Society has elected the following officers for 1915: President, W. L. Owen; secretary, S. A. Clark; delegate to State Association, C. C. Terry.

MRS. LEWIS C. CLINE, wife of Dr. Lewis C. Cline of Indianapolis, who underwent a critical surgical operation (gastro-enterostomy) the first of September is making a good recovery.

DR. FERNANDE HACHAT, a young woman physician of Hartford City, has been appointed secretary of the City Board of Health of that place, to succeed Dr. Samuel Harden, who resigned.

THE Gary Medical Society has elected the following officers for the coming year: President, T. B. Templin; vice-president, Grover Verplank; secretary, C. W. Yarrington; treasurer, W. P. Alexander; censor, E. D. Skeen.

THE Lawrence County Medical Society have elected the following officers for 1915: President, J. T. McFarlin, Williams; vice-president, John A. Gibbons, Mitchell; secretary-treasurer, F. S. Hunter, Bedford.

DR. B. M. EDLAVITCH of Fort Wayne, announces that he has ended his association with Drs. Porter, McCaskey and Weaver, and that he will continue his private practice in offices in the Gauntt Building, corner Berry and Webster Streets.

The Sullivan County Medical Society reports the following officers elected to serve for the year 1915: President, James M. Billman, Sullivan, secretary-treasurer, James B. Maple, Shelburn.

At their meeting on December 11 the Carroll County Medical Society elected the following officers for the ensuing year: President, B. F. Snyder, Camden; vice-president, E. D. Wagoner, Burrows; secretary-treasurer, W. R. Quick, Delphi.

Dr. F. E. Ray, formerly of Shelbyville, has retired from the active practice of medicine and has taken charge of the drug store which he has owned for some time in Indianapolis. He has an office in connection with the drug store but will make no calls.

Dr. L. M. Barney of Elkhart, who lost his eyesight about a year ago by the falling of a bottle of acid from a shelf in his laboratory at Miami, Fla., has received an agreed judgment for $22,500 against the Fidelity and Casualty Company of New York.

At a recent meeting the Tippecanoe County Medical Society elected the following officers for 1915: President, J. W. Shafer, La Fayette; vice-president, J. C. Burkle, West La Fayette; secretary, E. Van Reed, La Fayette; treasurer, Charles Hupe, La Fayette.

Dr. H. M. Hosmer of Gary, while on his way to St. Louis recently, was injured quite badly by the fall of an instrument case which jarred loose from the rack above and struck him over the eyes, breaking his glasses and embedding some pieces of glass in the eyes.

The following officers were recently elected by the Wayne County Medical Society: President, R. J. Pierce; vice-president, W. F. Fisher; secretary, A. J. Whallon; treasurer, L. M. Gentle; censor, three years, A. L. Bramkamp; delegate to State Association, J. E. King; alternate, L. F. Ross.

The County Commissioners of Wayne County have appointed the following committee to investigate the need for a tuberculosis hospital in that county, and to present recommendations for such a structure: Dr. A. J. Whallon, chairman, Dr. A. L. Bramkamp, Wilfred Jessup, G. H. Hoelscher, L. S. Bowman, E. H. Harris.

Dr. W. A. Gekler, superintendent of the Indiana State Tuberculosis Hospital located at Rockville, Ind., has resigned to accept the position of associate medical director of the Chicago Municipal Tuberculosis Sanatorium, his resignation to take effect Feb. 1, 1915. A competent man is desired to fill the vacancy caused by Dr. Gekler's resignation. Correspondence should be directed to Dr. Demetrius Tillotson, Secretary of the Board of Trustees, Greencastle, Ind.

During December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Merck and Co.: Arbutin, Merck; Benzene, Merck H. P., Crystallizable; Digitoxin, Merck; Silver Citrate; Silver Lactate.

E. R. Squibb and Sons: Pyocyaneus Vaccine: boxes of 2 ampules containing respectively 100 and 500 million killed bacilli.

CORRESPONDENCE

COMPLIMENTS FOR THE JOURNAL

Columbus, Ohio, Dec. 23, 1914.

My dear Dr. Bulson:—

Our journal did not issue Christmas greetings this year for reasons which will eventually develop in our financial report, but I could not refrain from writing you after receiving your pleasant holiday greeting this morning, and tell you of my high regard for your journal. No exchange which comes to my desk is read with more interest.

As a newspaper man and something of a novice in medical journalism, I at once turned to your journal after taking up this work, and found in it many points which I have sought to develop in the Ohio journal. I particularly like your editorials, your pleasing make-up, and your aggressive advertising methods. I think that the members of the Indiana State Medical Association are to be sincerely congratulated upon having such a progressive and high-class medium.

Wishing you a merry Christmas and a happy and prosperous New Year, I remain,

Sincerely yours,
George V. Sheridan,
Business Manager of the
Ohio State Medical Journal.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

Secretary's Report for 1914

For the third consecutive year the secretary's report shows an increase in the membership.

Membership, 1913	2,550
Died prior to Jan. 1, 1914	27
Delinquent, expelled, etc.	200
New members	247
Total membership for 1914	2,570

The following county societies participated in this growth and showed an increase in the membership of their respective societies over the previous year: Marion, Allen, Lake, Delaware, Elkhart, Laporte, Madison, Tippecanoe, Cass, Grant, Henry, Howard, Huntington, Noble, Dearborn-Ohio, Hendricks, Parke-Vermilion, Wells, Benton, Blackford, Boone, DeKalb, Fayette, Franklin, Hancock, Harrison, Jefferson, Lagrange, Morgan, Perry, Pike, Porter, Posey, Randolph, Rush, Tipton, Wabash, Warrick and White.

Four years ago, according to the annual report, there were six counties in which no organization existed. At present this condition exists only in one county, and strenuous efforts should be made this year to effect a combination of Brown county with one of its immediate neighbors.

RECEIPTS FOR 1914

2,570 members	$5,140.00
Lafayette exhibitors	185.00
Total	$5,325.00

PAID TO DR. DAVID W. STEVENSON, TREASURER

Check No. 1913	
43—Feb. 3	$4,160.00
44—March 4	380.00
45—April 4	288.00
46—May 5	122.00
47—June 4	38.00
48—Aug. 1	58.00
49—Oct. 6	72.00
52—Nov. 27	199.00
53—Dec. 31	8.00
Total	$5,325.00

Check No. 50, Nov. 27, was issued to refund $20 to the Lafayette Pharmacal Company, and Check No. 51, Nov. 27, was issued to refund the exhibit money of $10 to the Bannerman Company of Chicago.

I wish to thank the county secretaries who have been prompt without exception in collecting the dues, using the receipt books furnished by the association.

Respectfully submitted,

CHARLES N. COMBS, Secretary.

Treasurer's Report for 1914

David W. Stevenson, treasurer, in account with the Indiana State Medical Association.

DEBIT

To cash on hand after payment of all outstanding bills for 1913. (See THE JOURNAL, Jan. 15, 1914)	$2,777.40
1914	
From Feb. 3-Dec. 31—Secretary for dues	$5,140.00
Nov. 30—Exhibitors' booths	185.00
Total	$8,102.40

CREDIT

1914 From Feb. 11-Dec. 31—THE JOURNAL, subs.	$1,927.50
1914 From Feb. 11-Dec. 31—J. R. Eastman, chairman medical defense fund	$1,927.50
1914 From July 28-Dec. 9—Councilors expenses	$ 49.30

PRINTERS

1914	
March 17—Moore Langen Printing Co.	$ 2.75
March 18—Cleary & Bailey	109.70
March 18—Terre Haute Printing Co.	24.00
March 18—American Medical Association	2.50
March 18—R. F. Markley Co.	7.65
March 18—Terre Haute Printing Co.	2.75
April 13—Keller Crescent Co.	8.00
April 13—Cleary & Bailey	23.65
Oct. 22—Terre Haute Printing Co.	2.75
Oct. 24—Viquesney Printing Co.	62.50
Oct. 24—American Medical Association	27.00
Oct. 24—R. F. Markley	2.10
Dec. 9—Viquesney Printing Co.	18.75
Total	$ 294.10

STENOGRAPHERS

1914	
Oct. 22—F. E. Dillan	$100.00
Oct. 22—Mildred Scott-Hill	102.70
Oct. 24—G. W. H. Kemper, stenog. exp.	13.00
Oct. 24—Edith Renking	60.00
Nov. 5—Edna Bigelow	64.55
Total	$340.25
1914	
Oct. 24—Charles N. Combs, honorarium	$300.00
Oct. 24—Charles N. Combs, expenses	52.77
Total	$352.77
1914	
Oct. 24—G. W. H. Kemper, committee on necrology	$ 10.00
Oct. 24—George F. Keiper, expenses Lafayette session	78.60
Total	$ 88.60
	$4,980.02
To balance on hand	3,122.38
Grand total	$8,102.40

Respectfully submitted.

DAVID W. STEVENSON, Treasurer.

Jan. 4, 1915.

INDIANAPOLIS MEDICAL SOCIETY

Meeting of Dec. 1, 1914, Hotel Washington

Meeting called to order by the president. Minutes of previous meeting read and approved. Dr. C. K. Jones was elected to membership. Applications of Drs. John Diven and Earl B. Rinker were read for the first time.

Program: Dr. E. B. Mumford gave two cases as follows:

Osteogenesis Imperfecta.—R. S., male, aged 2 months. Born of healthy parents and given cows' milk from birth. Child gained but little during first year of life and presented a picture of underdevelop-

ment with slight rickets. Walking was delayed until eighteenth month and two weeks later right tibia was fractured following a slight fall. Within next six months there were three more fractures involving left tibia twice and right once. Roentgen-ray examination showed enlargement of medullary cavity with rarefication of cortical portion of backbone and thickening of periosteum. The fractures showed as thin lines without any displacement.

Congenital Dislocation of Hip.—J. C., aged 16 months, second child of normal parents, born at full term in normal labor; breast fed. Began walking at 15 months. At this time a limp of left leg was noticed, no pain or tenderness. Examination shows five-eighths inch shortening of left leg with adduction and outward rotation limited. Roentgen ray shows a dislocation at head of left femur. This case was reported in order to show Shenton's sign, which is, that when the hip-joint is normal a line following curve of under side of anatomical neck of femur joins with curve of top of obturator foramen, forming a continuous vault. This line is true with the leg in any position, but if a dislocation is present continuity of the line is broken.

Dr. A. L. Marshall reported a case of herpes zoster of cornea. Called attention to infrequency of this class of cases and complications arising therefrom. The anesthesia present is responsible in a way for the destructible and often uncontrollable ulcerations found. This case was reported to substantiate the theory that zoster is due to an infection attacking peripheral nerve endings and extending back to ganglion, with consequent ganglionitis. The motor paralysis sometimes found about eye and face in zoster is due to the same fact, the close proximity of motor terminals to seat of infection, with an extension inward of infection to the motor ganglion. The infrequency of panophthalmitis is due to distant location of ciliary ganglion which controls nutrition of interior parts of eye, virus spending its force before it reaches ganglion.

Dr. E. E. Padgett reported a case of complete obstruction from carcinoma of sigmoid. Patient, male, white, 49 years old; grocer by occupation. Always enjoyed good health and led active life until about three months previous to last illness. About three months ago noticed periods of constipation, for which cathartics were given. Later these periods were alternated with periods of diarrhea, abdominal cramps, vomiting, and at times passed blood in stools. Lost twenty-seven pounds in weight. First seen Oct. 27, 1914. Pulse 98, temperature 98, respiration 26. Abdomen very greatly distended and tympanitic, patient suffering great pain. General appearance that of prostration. Diagnosis, complete obstruction of bowel. Operated at once, and an annular ring of carcinomatous tissue found at junction of sigmoid and rectum. Obstruction to gas under pressure was complete. Bowels, both large and small, very greatly dilated and black in color. Removal impossible, and resection out of question because of general condition of patient. Colostomy done, and patient put to bed in very bad condition. Died some hours later. Another illustration of what may happen if exploratory operation is delayed.

Dr. H. C. Parker reported a case of iritis apparently cured with autogenous vaccine. Mr. C. G. B., aged 34, previous ocular history negative except that fifteen years previous he had a similar attack which had been diagnosed as iritis. This attack had been slow to respond to treatment. Personal history: acute gonorrheal urethritis sixteen years ago. Denies syphilis. Present condition, physical: well nourished, chronic constipation. Ocular condition: never worn glasses. O. D. normal in appearance, vision normal. O. S. inflamed for past five days. Examination showed wide pupil and quite regular, quite marked ciliary injection. Few pigment spots in anterior capsule of lens as a result of previous attack of iritis. Eye sensitive to palpation. Treatment under atropin, hot fomentations, aspirin and potassium iodid, condition changed for better, then worse. Turkish baths, protiodid and dionin helped slightly. After three injections of an autogenous vaccine made from seminal fluid (mixed culture), trouble cleared up. Seminal vesiculitis cleared up at same time.

Drs. Louis Burckhardt and W. D. Gatch reported a case of intramural gestation, gangrene of uterus; cesarean section six weeks after maturity.

Patient, aged 35, had had four previous normal labors and four miscarriages. Present labor was six weeks beyond term. Efforts to produce delivery by normal route were unsuccessful and attended by profuse hemorrhage. A heavy partition could be felt inside uterus separating head from examining finger. At operation gangrenous gestation sac was found attached to a gangrenous body, which was probably part of uterus which communicated with cervix. In removing uterus no ligatures were necessary. Patient made comparatively uneventful recovery.

Discussion: Dr. Beeler stated pictures shown by Dr. Mumford were shown much more plainly by the plates and explained in detail a correct reading of them, commenting on roentgenology of all such cases.

Dr. Foreman asked how intramural gestation could take place and how diagnosis of such a condition could be made.

Dr. O. G. Pfaff reported a similar case and reviewed literature bearing thereon. Stated there were only six such specimens known to literature. Considered such cases interstitial tubal pregnancies.

Dr. Kitchen asked for a cause of extensive gangrene.

Dr. Cregor, speaking on Dr. Marshall's case report, stated he had seen cases of herpes zoster but the cause had escaped. External trauma might be a cause. In some cases lesion begins centrally and extends outward.

Dr. Brayton mentioned several cases of herpes zoster. Infection in mucous membrane and skin is common source. Organism is yet to be isolated. Cause is along nerves. Seldom reaches hands and feet because immunization takes place before reaching these parts.

Dr. Gatch closed discussion.

Meeting adjourned. Alfred Henry, Sec.-Treas.

Meeting of Dec. 8, 1914, Chamber of Commerce

Meeting called to order by president. Minutes of previous meeting read and approved. Application of Dr. Geo. B. Jones read first time. Attendance ninety-four.

Program: Paper, "Gas Bacillus Infection," Dr. J. P. Simonds.

DISCUSSION

Dr. O. N. Torian said classifications of intestinal diseases of infancy are many, though none

of them have proven satisfactory; so also with our classifications of diarrhea of infancy. Difference of opinion as to cause of diarrhea. Those who believe that microorganisms are responsible for diarrhea classify them as infectious and non-infectious. Under infectious type are those due to dysentery bacillus and those due to gas bacillus.

Kendall has worked out a scheme for treating these types of infections. Gas bacillus he treats with high-proteid diet, and this practically always gives results, while dysentery he treats with high, carbohydrate diet, and results are certainly no more satisfactory than our treatment with high-proteid diet. Veeder of St. Louis recently reported on a number of cases so treated in which his results were no better than with high-proteid diet. Non-infectious diarrheas are not considered as due primarily to microorganisms, but are believed to be due to fermentation of carbohydrate foods and, therefore, are treated with a high proteid diet. The other school, the one which believes that diarrhea is a chemical affair, one due to decomposition of foods, believes that micro-organisms are simply contaminations and play a secondary part. They treat all diarrheas with a high-proteid diet. Kendall himself reported cases of twins who were infected with dysentery bacillus, but who were not ill. From a practical standpoint it requires too much time to wait for isolation of the organism, and inasmuch as results are just as good in treating all diarrheas with high-proteid diet, it seems wisest for those who are practicing medicine to use such treatment. My personal experience is that results are much better with high-proteid diet for all diarrheas than with older methods of treatment.

Dr. Moon: While getting brain tissues from a dog aseptically the Welch bacillus was found. In removal of goiter for experimental purposes with a careful technic gas bacillus was found. This organism was found in all parts of a dog with no previous injury. In removing glands from left inguinal region and epitrochlea in a patient having arthritis deformans, gas bacillus was found while preparing a vaccine. I have not found the Welch bacillus in rabbits and guinea-pigs. Have almost concluded it is found in carnivorous and not in herbivorous animals.

Dr. Ferguson cited a case of gunshot wound of lower third of thigh in which erysipelas seemed to have developed. Foam escaped from wound. Looked like gangrene. Amputated near hip. Gas escaped from veins. Isolated *Bacillus aerogenes*. Gas bacillus is found in endometritis. The fact that many cases of gas bacillus infection get well shows man has a great resisting power to this organism.

Dr. Martin: Infections from gas bacillus are rare according to City Hospital reports. I think they are not recognized as such. Cited a case of fracture of forearm. Infection developed quickly. Amputation advised, but before this could be done, arm and shoulder were complicated. Recovery. Treatment should depend on development. This condition is recognized earlier now.

Dr. Shimer: Many cases of gas-bacillus infection were found during the Balkan war. Probably infection gained entrance through intestinal mucosa, later reaching bruised tissue.

Dr. Kiser read an abstract from the New York *Medical Journal* which gave the following treatment: Above discoloration, a circular row of injections of hydrogen peroxid subcutaneously. A second similar circle an inch higher. A barrier thus is formed. "Nothing is so toxic to the bacillus of gaseous gangrene as hydrogen peroxide."

Dr. Neu: In one thousand necropsies found gas bacillus in only one, and every organ was infected in this one.

Dr. Simonds stated the organisms were found in liver of dogs very frequently, also in intestinal tract of herbivorous animals and in more solid tissues of carnivorous animals. He stated that dietetic treatment will improve most cases of alimentary tract.

At close of meeting lunch and cigars were served.

ALFRED HENRY, Sec.-Treas.

Meeting of Dec. 15, 1914, Hotel Washington

Meeting called to order by president. Minutes read and approved. Application of Dr. Wm. J. Mellinger read first time. Attendance 55.

Miss Anna L. Strong of Washington, D. C., in employ of U. S. Child Welfare Bureau of Department of Labor, gave a ten minutes' talk on child welfare exhibits.

Program: Case Report, Dr. J. D. Garrett. "Aneurysm of ascending and transverse portion of arch of aorta, symptoms of which simulated gall stones or malignant disease of heart."

Paper: "Differential Diagnosis of Mediastinal Diseases," Dr. W. T. S. Dodds.

Differential diagnosis of mediastinal diseases always has been difficult. Physical findings are hard to interpret because of changed physical resonance. Leopold Auenbrugger said in 1760, "The thorax of a healthy person sounds when struck."

Years ago I tuned to middle C certain chest sounds as a standard and was able to standardize tones in this field with a skilled pianist who correlated sound waves as harmonious. Ten years ago I began the study of chest sounds under direction of an expert pianist and was able to reproduce resonance of tone with a remarkable degree of accuracy. We found high normal resonance note to be natural A and low normal resonance note middle C. We found that in corpulent persons the notes ranged from E to natural A, in emaciated persons from E to middle C, and in muscular rigidity from middle C to natural A. The degree of muscular rigidity may produce any of the notes from middle C to natural A and still be in perfect harmony. Ear obtains sound impression direction from its last deflection. It may be echo of original vibration. Indeed, it may be a confusion of both. Phonendoscope, which is an adjunct to the ear, is capable of conducting certain sounds. Phonendoscope tuned to hear sounds in a corpulent chest will greatly exaggerate sounds in emaciated chest. From study of many cases of different forms of pathological conditions in mediastinum, I have as yet been unable to demonstrate differential diagnostic resonance. Fluid, pus, enlarged glands, dilated heart, malignant infiltration is difficult, if not impossible, of differentiation. As an argument to statement presented, I have opinions of clinicians at work on certain pathological conditions in mediastinum which afterward were proven to be erroneous at postmortem.

I am convinced from considerable observation that physical findings of mediastinum are more or less haphazard and guess work and are of little value in making a diagnosis or prognosis. Clinical history

and previous diseases will greatly assist in physical findings, but are not conclusive at any time. Consequently I depend on fluoroscope and stereoscopic roentgenogram as conclusive evidence, more than the objective or subjective findings.

Discussion: Dr. Lindenmuth: We are not familiar enough with different chest signs. Different-shaped chests give different sounds. Position of patient determines sounds also. If more time is taken any abnormal chest will reveal sufficient evidence for diagnosis. Physical examination followed by Roentgen ray and reexamination enables one to check up on errors. I wish every doctor had a Roentgen-ray apparatus.

Dr. Alburger: In the last twelve years I have held about 2,000 necropsies and checked up on physical diagnosis of chest. Pneumonia can be diagnosed easily, but in atelectasis, chronic tuberculosis, empyema and many other conditions more than physical examination must be resorted to. Roentgen ray is naturally looked to as best aid.

Dr. Beeler: Dr. Thomas of Cleveland says Roentgen ray is first in diagnosis in mediastinal tumors. He also says plates may or may not show real conditions but that fluoroscopic views should be made. There should be clinical signs and symptoms to insure a more correct diagnosis.

Dr. Sterne: Physical diagnosticians must have a method and carry it out. Then Roentgen-ray plates may show the same conditions. Roentgenogram and fluoroscope should both often be used, properly interpreted, and checked up with a careful and methodical physical examination.

Dr. Kolmer cited a complicated case, giving details and stated that one should be very careful in diagnosing mediastinal diseases. Syphilitic and tubercular caries were mentioned as conditions to look out for.

Dr. Kimberlin (on case reported by Dr. Garrett): Low blood-pressure was the surprising thing in this case. All patients with pulmonary edema died from exhaustion of left ventricle. This heart was hypertrophied because there was such a marked aortic aneurysm. The force is thereby absorbed. Case was sent in as gastric carcinoma.

Concerning Dr. Dodds' paper: Auscultation and percussion may be guess work, but does not think so. This may not mislead the older practitioner but will the younger. If one knows how and will take time, conditions can be diagnosed by physical and clinical examination.

Dr. Dodds: I would not Roentgen ray a pneumonia. I defy one to make a differential diagnosis of mediastinum without Roentgen ray. Cases reported were all given physical examination and then Roentgen rayed.

Meeting adjourned.

Alfred Henry, Sec.-Treas.

Meeting of Dec. 22, 1914, Hotel Washington

Meeting called to order by president. Minutes of previous meeting read and approved. Dr. S. E. Earp announced that *American Medicine,* New York, was collecting money for relief of Belgian physicians and that anyone wishing to contribute may do so. Society voted to contribute $25.

Program: Dr. Orville Smiley showed a horseshoe kidney obtained from a recent postmortem of a patient dying from pernicious anemia.

Paper: "Notes of Fulguration Treatment of Bladder Tumors with Reports of Cases," H. G. Hamer. Tumors of bladder are of more frequent occurrence than is commonly supposed. Hematuria is most characteristic and frequently the only symptom. Considering all varieties of bladder tumors, they are more frequent after middle life. Villous papilloma is most frequent. Papillomata frequently recur after operation, and tend to become malignant. Results of operative treatment have not been encouraging. Fifty per cent. of papillomata recur at original site or in suprapubic wound after operation. Total extirpation of bladder has a very high mortality. Fulguration treatment of bladder tumors was first reported by Beer and Keyer, Jr., in 1910. Since then many urologists have reported varying success from this method of treatment. The fact that the treatment can be applied through urethra without a general anesthetic, and that it is reasonably sure of destroying the growth, with a small per cent. of recurrences, has made it the method of choice in a majority of such cases. Fulguration current is applied by means of an insulated wire passed through catheter channel of a catheterizing cystoscope. Oudin or D'Arsonval current may be used. Applications of current for fifteen or twenty seconds each are made at different points on growth, the number depending on size of tumor and tolerance of patient to cystoscope. Treatments are repeated at intervals of from one to two weeks. Hemorrhage often is controlled by first or second treatment. Author reported twenty-one cases of papilloma of the bladder treated by fulguration. In several of these, papillomata disappeared entirely and in others recurrent growths have been kept in check.

DISCUSSION

Dr. McCown: Keyes reported eight cases of fulguration, all of which recovered. All bladder tumors are not to be fulgurated. Many of them are malignant. Tuberculous ulcers do not respond to this treatment. Frequent recurrence.

Dr. Garshwiler: Best report by Hugh Young. One hundred and seventeen cases reported at A. M. A., 1913 (seven under 40). Most benign tumors become malignant according to him. Allowing hematuria too long often causes treatment to fail. Early treatment is the secret. Eight to twelve days interval is average time. Treatment causes little pain. Removal of tumor is all right if all of it and part of bladder wall is removed.

Dr. Charlton: Every newly proposed measure develops two groups of men, enthusiastic promoters who usually go much too far and skeptics who withhold approval and so often miss some helpful thing. Albarran's statement years ago that all bladder tumors tended toward malignancy recently was echoed in substance by Barney, who urged that all bladder tumors are potential for death, either by hemorrhage or malignancy and these views are believed by all to be substantially true. Management of malignancy in this field should be substantially that of malignancy elsewhere. Elementary principles of pathology and treatment must be substantially the same. We do not see our great general surgeons trying to burn out breast cancers. There was a time when gynecologists were cauterizing uterine cancer, leaving only a shell behind. Cautery was used for making incisions in various

faddish methods; rhinologist cauterized without stint. In first place, cauterized incisions do not heal by first intention and, to my judgment, are never as clearly done and defined as with the knife. The cautery iron was a prominent feature in surgery of medievalism but I cannot enthuse over it to-day. To my mind, its field is very limited and fulguration, it is to be remembered, is nothing more than cauterization. In all forms of cancer, we are urged to get the cases early and excise surrounding structures and all tributary tissue. I believe this principle should hold in bladder tumors, so that I cannot choose this method of searing over surfaces and leaving base of tumor unattacked. A section of bladder wall should come out wherever possible, and I would leave fulguration for palliation in operable cases from whatever cause, or to be used in young persons with little danger of immediate malignancy, showing small sessile tumors that may be destroyed fairly and safely by this method. In suitable cases I certainly should place surgical removal first.

Dr. Wishard: Fulguration is not advisable in broad-based and large tumors. When tumors are over or near to ureteral orifice, fulguration might produce cicatrization and should be avoided. Cited a case which had many recurrences, each in turn relieved by fulguration. No one would open bladder suprapubically to remove a papilloma or much of bladder wall.

Dr. Brayton commented on horseshoe kidney shown by Dr. Smiley. Gave an interesting talk on progress made in genito-urinary work.

Dr. Hodges: We used to diagnose papilloma of bladder but that was little to do. The exact extent and treatment were unknown to me. Dr. Hamer has made marvelous revelations to me in this new treatment. We do not have to send patients to Chicago. They can be taken care of here at home.

Dr. Erdman: I am concerned about patient following fulguration. Time only will tell. Suppose the wire were run through pedicle, severing tumor, allowing it to float in bladder?

Dr. Hamer (closing): In answer to Dr. McCown's question as to whether I have observed bullous edema to follow fulguration, I have not observed it. As to appearance of tubercular ulcers of bladder following fulguration, mentioned by Dr. McCown, I can conceive of a tubercular infection of upper urinary tract coexisting with a papilloma of bladder, but do not believe that tubercular ulcers are produced by fulguration. On the contrary, this treatment has been applied to ulcers of bladder with good results. Severe burns of bladder wall should be considered as due to faulty technique. I do not wish to be considered an enthusiast, but I do believe that papillomata of bladder, with few exceptions, are better treated by fulguration than by any other means at our disposal.

Meeting adjourned. ALFRED HENRY, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of Dec. 11, 1914

The regular meeting of the Muncie Academy of Medicine was held in the parlor of the Muncie Y. M. C. A. building on Friday evening, December 11, and was called to order at 8:15 by President O. E. Spurgeon, M.D. The subject for the evening was "Functional or Reflex Headaches." The quiz was conducted by Dr. W. J. Molloy. The paper was read by Dr. F. E. Hill who said in part: Headache is a manifestation of various disorders of the nervous system or other organs of the body and is merely a symptom. It seems as if the meninges and especially the dura mater is the seat of irritation from which the sense of pain is interpreted. There are filaments of the sympathetic nervous system communicating with the meninges and cerebral structures, and it is through this connection that headache results. The general causes of headache are anemia and sudden hemorrhage; constitutional diseases, such as syphilis, gout, nephritis, rheumatism, etc.; hysteria, neurasthenia, constipation and disorders of digestion. In making our diagnosis we must differentiate between the conditions named and rheumatism of the scalp muscles and eye defects. Potassium iodid and the salicylates will relieve a large per cent. of headaches.

The discussion was lively and participated in by Drs. Molloy, Wadsworth, Spurgeon, Bucklin and others.

Adjourned. H. D. FAIR, Secretary.

Meeting of Dec. 18, 1914

The subject of this meeting was "Arteriosclerosis," and the quiz on etiology, conducted by Dr. Mix, brought out these facts: The primary pathological changes in arteriosclerosis are due to the loss of elasticity of the yellow elastic fibers in the connective tissue of the tunica media, and their final breaking. This deterioration deprives the intima of its support, and minute hernias into the muscular coat result. Nature then makes an effort to restore the caliber and contour of the vessel by thickening (probably by a system of proliferation) the walls of the intima, and it is purely a compensatory process. Dr. Molloy contended that there was evidence to prove that disordered chemistry of the body due to improper diet, faulty digestion, both gastric and intestinal, together with the attendant inefficient elimination was responsible for a large per cent. of the cases of arteriosclerosis.

Dr. B. B. Morrow read a paper on "The Physical Signs and Symptoms." Arteriosclerosis disturbs function in three ways: (1) The activity of an organ lessens and there is a gradual reduction in its capacity for work; (2) when arteriosclerosis reaches a final obliterative stage, if in a peripheral vessel of the hand or foot, gangrene supervenes, or if in an end vessel, necrosis; (3) arteriosclerosis renders small arteries more likely to spasm, likely to be accompanied by pain and loss of function. In old age every organ and tissue shows changes which may be attributed to arteriosclerosis. So remarkable are the powers of adaptation that an extreme grade may be compatible with apparently good health. Early symptoms are light pallor, gradual loss of intellectual keenness, lessening of muscular power; skin gets flabby, and hair turns prematurely gray. Cardiac hypertrophy becomes marked and the urine shows a trace of albumin. The patient becomes nervous and irritable and complains of headache resembling migraine, accompanied by high blood-pressure and vertigo. Memory and judgment are impaired. Finally progressive dementia and convulsions.

The three cardiac types are valvular, myocardial and coronary. The patient gets short of breath when climbing a stair. He may awake in the night with

dyspnea; attacks of angina pectoris or pulmonary edema may occur. Painful gastric and intestinal disorders associated with spasm of the mesenteric vessels occur. In the legs, cramps follow overexertion or prolonged strain. In the aged, knotting of the leg into lumps that disappear and numbness are common. Prominence of the arteries is seen in the temporal region; they may stand out and visibly throb, as may also the radials and brachials.

Dr. Clay A. Ball spoke on diagnosis. Arteriosclerosis is a name in pathology; not that of a morbid process, but rather the result of a morbid process that has been so complex that the clinical picture varies greatly, depending on whether the process is diffuse or localized. In deciding on the exact diagnosis, the Wassermann reaction, renal functional tests, blood-pressure readings and the Roentgen ray should be brought into service, for they give information gained in no other way. Uncomplicated sclerosis of the arteries may give no hypertension, but hypertension goes mainly with renal involvement. It is the association of heart, arteries and kidneys that has given rise to the terms cardiac, vascular renal or cardiorenal disease. Barring an accident, like cerebral hemorrhage, the final termination is usually due either to cardiac failure or impending uremia.

Adjourned. H. D. Fair, Secretary.

BOONE COUNTY

At the regular meeting of the Boone County Medical Society, Dec. 1, 1914, the following officers and delegates were elected for 1915: president, Dr. P. B. Little, Whitestown; vice-president, Dr. G. A. Schultz, Lebanon; secretary-treasurer, Dr. M. A. Armstrong, Lebanon; delegate to State Association, Dr. H. A. Beck, Lebanon; alternate, Dr. C. D. Umberhine, Mechanicsburg; delegate to district society, Dr. Clancy Bassett, Thorntown; alternate, J. S. Shields, Thorntown.

Dr. Carter H. Smith of Lebanon was elected president emeritus for life in recognition of many years of faithful service to the society.

Dr. J. E. Hanna of Noblesville read a paper "Anesthesia and Anesthetics," which was well discussed.

Adjourned. M. A. Armstrong, Secretary.

DELAWARE COUNTY

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building, Friday evening, December 4, and was called to order at 8:15 by President D. M. Green, M.D. Drs. Benjamin B. Morrow and Russel E. Cole were elected to membership.

The annual election of officers resulted as follows: president, Dr. C. Melvin Mix; vice-president, Dr. F. W. Dunn; secretary-treasurer, Dr. H. D. Fair (reelected). Dr. O. E. Spurgeon was reelected a member of the board of censors.

Dr. Dwight M. Green, the retiring president, made a short address, reviewing the good work done by the Delaware County Medical Society in the past and making some suggestions as guides for the future. "The future of this society rests absolutely on the liking of its members for, and their willingness to do, earnest, conscientious, scientific work. We need a better acquaintance with one another; a better idea of what the other fellow is doing and how he is doing it; a better appreciation of his viewpoint, his needs, his aspirations and his ideals, and a better understanding that the more we know of these things the broader we ourselves become and the better fitted to do good work."

Delaware County particularly needs better facilities and methods for dealing with its insane. We ought to have a place where the insane or the suspect or the charged may be placed for observation, and while awaiting the action of an insanity commission or an opportunity to enter the asylum. Too many have been heretofore and are being at the present lodged in jail during these periods.

In the discussion, Dr. Fair raised the query as to whether or not a patient so confined might not have grounds for action against the persons or officers responsible for his imprisonment.

Dr. George R. Andrews, speaker of the evening, devoted most of his time to the plea for more thoroughness in our attempts at diagnosis or recognition of appendicitis, for it is certainly worth while. Of course the early diagnosis of atypical cases is difficult, and this fact only adds to its importance. Appendicitis is not necessarily a symptom-complex, and may be considered a condition rather than a disease. There ought to be some definite methods of determining a plan of action that would be approved alike by the physician and surgeon. There should be no difference of opinion or controversy over the meaning of certain signs or symptoms. Infection causes the mischief. Every pain in the abdomen with nausea and unaccompanied by diarrhea is dangerous. Acute pain in the region of the appendix with no elevation of temperature, no disturbance of pulse and no marked change in the leukocyte count should be allowed to rest under close observation. On the other hand, a patient with pain, no elevation of temperature, no increase in pulse rate but with increased leukocyte count, needs a surgeon, and promptness is most important. I consider the leukocyte count one of the most important diagnostic measures at command. It is really a reproach that in this day a patient could be allowed to die with peritonitis due to a ruptured appendix. In nearly every instance operation should be done as soon as the diagnosis is clear.

DISCUSSION

Dr. O. E. Spurgeon spoke of the atypical, borderline case that presented so many symptoms pointing to some other disease or pathology, and so few that definitely indicated appendicitis, stating that it was no wonder the most careful and conscientious physician did sometimes make a mistake in his diagnosis. There have been typhoid fevers that for a time looked more like appendicitis; and protracted attacks of appendicitis that had nearly all the symptoms and indications of typhoid. Dr. Spurgeon cited concrete examples where experienced surgeons had been mistaken after following a supposedly positive train of symptoms, in which he had the approval of his class in the diagnosis.

Dr. C. M. Mix: The conditions that warrant one in using "itis" when describing a disorder of the appendix always makes the visit of a surgeon advisable. Appendiceal colic is not appendicitis, but after an appendix has become inflamed it is better removed. If a patient cannot be operated on as soon as diag-

nosis is made, it is sometimes better and safer to wait a day or more till nature has made some effort to safeguard the adjacent tissues, thereby lessening the danger of general peritonitis.

Drs. W. J. Molloy and G. W. H. Kemper also took part in the discussion.

Adjourned. H. D. FAIR, Secretary.

ELKHART COUNTY

November

Regular monthly session of Nov. 5, 1914, was called to order by Vice-President DeFrees at 2:30 in the Town Hall, Middlebury. Minutes of last meeting read and approved.

Drs. G. W. Spohn and F. N. Dewey and the secretary were appointed special committee to consider eligibility of delinquent members.

Twenty-nine members present.

First paper, "Etiology of Thyroiditis and Exophthalmic Goiter," by Dr. J. O. Walter, Bristol.

Metastatic infection and congestion are the factors responsible for acute inflammation of the thyroid gland. Acute thyroiditis may accompany or follow any acute infectious disease occurring elsewhere in the body. High blood-pressure may cause hemorrhages into the interlobar connective-tissue spaces, with destruction of gland tissue. The resulting sclerosis and atrophy may be sufficient to cause hypothyroidism and myxedema. Sudden onset, chill, difficulty in deglutition, neuralgic pains, dyspnea, cyanosis, hoarseness, suffocation and edema of glottis covers symptomatology of acute thyroiditis. Chronic thydoiditis with abscess formation is an unfavorable sequel to the acute disease. Exophthalmic goiter: (1) parenchymatous, (2) follicular, (3) fibrinous, (4) vascular, (5) cystic. Thyroid adenomas and aberrant thyroid masses. Enlargements of thyroid during pregnancy and menstruation. Cyon traced sympathetic nerve paths from the posterior lobe of the pituitary body, which is a sympathetic structure, rich in chromaffin, to the thyroid, and suggests that the unidentified center of the sympathetic system lies in the pituitary body.

Dr. Walter produced evidence to show that exophthalmic goiter may follow simple goiter; that it follows acute infections, especially syphilis, typhoid fever, influenza; that endotoxins and auto-intoxication may be factors in its cause. Ether anesthesia, traumatic shock, blows on the head, overwork, emotion—especially violent anger and terror—have been cited by different observers. The symptoms all point to a toxemia, and Dr. Walter returns to the apparent connection which the symptom-complex of exophthalmic goiter holds to the center of the sympathetic nervous system, supposedly existing in the posterior lobe of the pituitary body. Sufficient evidence of hereditary causes for Graves' disease has not been produced.

"The Treatment of Exophthalmic Goiter" was presented by Dr. B. F. Teters, Middlebury.

He briefly reviewed the theories of the pathogenesis of the disease, showing the relation between them and the various forms of treatment.

Exophthalmic goiter is primarily a medical condition, and an attempt should be made to restore the gland and its function to normal by non-operative treatment before operation is resorted to.

He then takes up the various remedies. Thyroid extract has a very limited field in the treatment of exophthalmic goiter, in the so-called asthenic stage. Iodin treatment has practically the same indications as the thyroid extract. The antithyroid products, such as antithyroidin, milk of thyroidectomized goats, Beebe's serum, etc., are indicated in conditions exactly opposed to those calling for thyroid extract and iodin. Roentgen-ray and faradic and galvanic currents have been used with varying degrees of success, as have also the injection into the gland of boiling water and iodin. Dr. Teters believes that the most rational treatment is the one which not only supplies the deficient elements in the blood and counteracts an excess of others, but removes exciting causes and strikes at the pathologic conditions. This treatment includes such hygienic measures as absolute rest, proper action of stomach, bowels and kidneys, relief from effect of diseased sexual organs, and then the administration of the hydrobromate of quinin and ergotin, as advocated by Forcheimer. The latter states that from 70 to 90 per cent. of all cases can be cured medically. Dr. Teters reported a number of cases which were completely cured by the medical treatment. Surgical intervention is indicated (1) when the patient grows progressively worse under medical treatment; (2) when the size of the gland causes serious compression symptoms; (3) when the tachycardia is not relieved and loss of weight continues. Contra-indications to operation are bad general condition and serious heart changes.

DISCUSSION OF BOTH PAPERS

Dr. F. N. Dewey, Elkhart: Ten per cent. of females have goiter. Simple goiter should be let alone. Forcheimer had only one death in medical treatment of exophthalmic goiter, and that was due to excessive doses of thyroid extract. Dieulafoy has used ipecac in large doses for the last thirty years and strongly advocates medical treatment.

Dr. J. C. Fleming, Elkhart: Exophthalmic goiter is a surgical disease. Küttner says 30 per cent. of cases treated medically died. He cited five authorities who maintain that the surgical treatment gives the best results. Cases should be studied carefully—worse the case, the less should be done. Bad cases should have only a simple ligation or boiling water injection, local anesthetic and morphin and scopolamin. Kocher ligates one superior thyroid, waits three weeks and ligates the other. All cases resisting medical treatment for three months should be turned over to the surgeon for operation.

Dr. D. L. Miller, Goshen: I get good results in treatment of goiter with an ointment of iodid of ammonia, 1 dram, to the ounce of vaselin, applied locally.

Dr. A. C. Yoder, Goshen: Case of exophthalmic goiter not definitely known. Treatment is mainly surgical. Other forms of treatment are for those people who absolutely refuse operation. Emphasizes rest and quiet in treatment.

Dr. E. J. Hagenbaugh, Elkhart: Fright is often the beginning of exophthalmic goiter. The Mayos select very carefully their cases for operation.

Dr. P. B. Work, Elkhart: Rosenau, who has done so much work on the etiology of rheumatism, etc., will doubtless be able to demonstrate by his improved method of isolating organisms from tissues formerly considered as sterile the coccus that produces goiter, both simple and exophthalmic. He has already done some very interesting work in isolating from the

enlarged thyroids of patients cocci which were found in pure culture in the tonsils of same patient.

Dr. E. M. Hoover, Elkhart: Rest is important in treatment of these cases. Reduce metabolism to a minimum, thereby reducing work of glands of internal secretion.

Dr. B. F. Kuhn, Elkhart: Cause of exophthalmic goiter may rest on same foundation as cause of nephritis. Multiplicity of remedies proves inefficiency of all. Never operate a case in thyrotoxicosis.

Dr. C. W. Haywood, Elkhart: I have neve rfailed to get good results in simple goiter by use of positive galvanic current, using a special electrode and saturated solution of potassium iodid. Field of the Roentgen ray is in preparation of exophthalmic case for surgery.

Dr. W. B. Krieder, Goshen: Discussed the relation of exophthalmic goiter to eye symptoms and signs.

Dr. G. W. Kirby, Goshen: Best results in treatment follow intelligent surgical interference.

Dr. H. K. Lemon, Goshen: Goiter occurring in young woman of age of puberty gets well spontaneously. Severe cases do not get well by any medical means. Cases cited.

Adjourned to Park View Hotel. Chicken dinner.

James A. Work, Jr., M.D., Secretary.

December

Goshen, Dec. 3, 1914. Regular session called to order at 8 p. m. by Vice-President Defrees in the offices of the Drs. Kreider. Minutes of the November meeting read and approved. Report of committee on annual and Tri-State meeting. Motion made and carried that society entertain visiting doctors at tri-state meeting with banquet. Motion made and carried that committee be appointed to draft resolutions of sympathy to be conveyed to the bereft family of Dr. B. F. Whitmer, Goshen. Chair appointed Drs. D. L. Miller, B. F. Teters and A. C. Yoder.

Regular election of officers resulted as follows: president, C. W. Haywood, Elkhart; vice-president, B. F. Teters, Middlebury; secretary-treasurer, J. A. Work, Jr., Elkhart; censor for three years, E. E. Ash, Goshen.

Presentation of case, M. A. Farber. The chair appointed J. C. Fleming, B. F. Kuhn and A. C. Yoder to examine the patient. The report of the committee follows: Boy, aged 8, good family history, no tuberculosis, cancerous or hereditary disease. Patient perfectly well until last August, at which time he began to complain of pain and stiffness in arms, then swelling in feet, especially in toes. Following this, stiffness in knees began. He could walk with difficulty, but could not run. He was then given antirheumatic treatment and in last few weeks has improved, but is still in helpless condition. S. P.: Heart and lungs negative. Abdomen and spine negative. No taxia, no paralyses, reflexes normal. Mouth shows two ulcerated teeth, from around one of which pus may be expressed. Tonsils look pretty good except that left tonsil gives suggestion of inflammation. Cervical glands all enlarged. Diagnosis: Metastatic infection of joints and muscles with primary focus in teeth and tonsils. Treatment suggested: Clean up mouth and enucleate tonsils.

Paper, "Pathology and Treatment of Acute and Chronic Gonorrhea in the Male," F. M. Freeman, Goshen.

1. Irrigation back to bladder with silver salts, preferably argyrol, protargol or albargin.

2. A more liberal diet.

3. Internal administration of balsamics and antiseptics of little value. Routine use of hexamethylenamin positively harmful.

4. Vaccine therapy of value where gonococcus is sole factor, especially in metastatic lesions, such as joint infections.

5. Treatment of chronic mixed infections by vaccines usually unsatisfactory. Gonococcic stock vaccines as good as autogenous because toxicity of gonococcic vaccine diminishes with age.

6. The evidence in favor of antigonococcic serum does not justify its employment.

Paper, "Gonorrhea in the Female," James A. Work, Jr., Elkhart.

A simple urethral infection with gonococci may at any time be complicated by extension into other parts of the urogenital tract, by gonococcemia, and by metastatic focalization in lymphatic glands, endocardium, joints, tenosynovia. Case reported in detail by Phemister is particularly interesting on account of its chronicity and because of the differential diagnosis. Gonorrheal salpingitis may be confused with appendicitis, ectopic pregnancy, some uterine malformation or bad position which was causing dysmenorrhea or "mittelschmerz." Tuberculous salpingitis must be considered and serum, bacteriologic and Roentgen-ray examinations must be made. Phemister's case shows the characteristic cycle of immunity and recurrent lighting up of the infections which are peculiar to gonococcal infection.

Gonorrheal vulvovaginitis in small girls is usually contracted by contaminated fomites—not by sexual contact; unprotected pubis and vulva. Silver nitrate and vaselin give best results in treatment of this condition in young girls. Protect the areas higher up in any low infection of urogenital tract. Organic and inorganic silver salts, iodin and the dry treatment enjoy the preference in treatment of girls past puberty and women. Conservative treatment of areas above cervix. Rules to be observed.

The writer decries the prevalent use of vaginal douches for every conceivable pelvic condition. Women should be instructed not to douche, and treatment of gonococcic infection especially should be conducted without a single douche.

Reference was made to case reported by W. S. Johnson of San Francisco, and following conclusions were repeated:

(1) Never pronounce women free until after persistent study of entire genital tract; (2) examination of smear from urethra, vagina or cervix with failure to find Gram-negative diplococci does not exclude their presence; (3) complete disappearance of both subjective and objective symptoms not incompatible with presence of gonorrhea; (4) certain percentage of cases are misunderstood unless thorough and searching examination is made after the menstrual period; a time when gonococci concealed in the endometrium are released in numbers.

Puerperal infection with gonococcus is usually mild in outward manifestation, but usually sterilizes the woman. Sterilization of the newly wedded girl is done in the same way, by extension of the infection to the fallopian tubes with very mild outward symptoms or none at all.

DISCUSSION

Dr. C. L. Amick, Wakarusa: Keyes in his 1912 edition says that astringents have taken the place of the sounds used by our forefathers in causing strictures of the urethra. It makes little difference what is used, just so it is a *mild* antiseptic. Preference is organic salts of silver. Govern treatment by microscopic findings. Dr. Amick claims to cause disappearance of gonococci in four or five days. At end of fourth day has frequently found none. Uses argyrol almost exclusively. Inject and hold in urethra fifteen minutes without distention. Rule: never put anything into urethra you would not put into a healthy eye. Case reported: Young man married by consent of physician who gave him a clean bill of health; infected his wife immediately. This case typical of a large class. General practitioner should give them closer attention and be sure that case is absolutely well before marriage consent is given. Educate young men and women in sexual matters. Uses 2 per cent. argyrol initial irrigation and gradually increases. Navy surgeons put acute gonorrheal urethritis cases in bed on milk diet.

Dr. J. C. Fleming, Elkhart: Phemister's case illustrates reward for scientific research. Pelvic infections should be left alone in acute stage. Differentiate between gonococcic and streptococcic infection. Questions advisability of 25 per cent. silver nitrate solution in vulvovaginitis of children.

Dr. G. W. Spohn, Elkhart: Strength of solution to be used in eye depends on severity of infection.

Dr. A. C. Yoder, Goshen: Questions statement that acute gonococcic urethritis may be cured in four days.

Adjourned.

JAMES A. WORK, JR., M.D., Secretary.

FLOYD COUNTY

The Floyd County Medical Society at its annual meeting in December elected the following officers for the year 1915: President, W. J. Baxter; vice-president, W. C. Winstandly; secretary-treasurer, P. H. Schoen; censors, E. P. Easley, Wm. L. Starr and F. H. Wilcox; delegates to state convention, F. W. Hazelwood; alternate, C. C. Funk.

GRANT COUNTY

November

The Grant County Medical Society held its November meeting in the Marion Public Library on the evening of November 24. Dr. Marshall T. Shively, the treasurer of this society and one of its oldest and most respected members having died on the morning of the 23d, it was moved that all business be dispensed with and that the society take action regarding the death of Dr. Shively. This motion was carried.

It was moved that the president appoint a committee of three to draw up resolutions of respect, a copy of which should be sent to the family, a copy to each of the daily papers, and a copy to be spread on the minutes of the society. That the committee be further empowered to purchase a suitable floral tribute to be sent to the late home of Dr. Shively. Carried.

The president appointed as this committee, Drs. A. A. Hamilton, L. E. Eshelman and J. D. McKay.

It was moved that the society meet in the Marion Public Library on Thursday afternoon at 2 o'clock to take action on the resolutions and to attend the funeral as a body. Carried.

Society adjourned. J. E. JOHNSON, Secretary.

December

The annual meeting of the Grant County Society was held on the evening of December 22. The meeting partook somewhat of the nature of a social session, refreshments and cigars being served the members by the officers.

Reports for the year were read by the secretary and treasurer. The year has been one of the most successful ever had by this society. The average attendance far surpassed that of any previous year. The plan of making every third meeting a "quarterly meeting," addressed by an outside speaker, proved very attractive. The attendance at these meetings was the largest of the year.

The society continued the custom which has prevailed for several years of holding the meetings from June to October, inclusive, at the smaller towns in the county. These we have termed our "migratory" meetings. The members go by automobile or trolley and take their wives and daughters. These sessions are preceded by a chicken dinner served by the local ladies. While the scientific session is in progress, the ladies are entertained by the wives of the resident members. The ride and the dinner conspire to make these the most successful regular meetings held during the year.

There were nine applications for membership read at the meeting and referred to the board of censors.

The election of officers resulted as follows: President, Dr. V. V. Cameron; vice-president, Dr. L. H. Eshelman; secretary, Dr. J. E. Johnson; treasurer, Dr. A. A. Hamilton; censor, Dr. J. D. McKay; delegate, Dr. G. R. Daniels; alternate, Dr. C. B. Vigus.

The report of the treasurer showed the largest balance for many years. The report was referred to the auditing committee.

The meeting was addressed by Theodore W. Singer, representing the American Medical Association, at the conclusion of the business session. Mr. Singer spoke on "County, State and National Organization."

The following members were present: Drs. O. M. Davis, G. G. Richardson, O. W. McQuown, L. D. Holliday, D. A. Holliday, G. G. Eckhart, L. H. Eshelman, W. H. Braunlin, C. O. Bechtol, E. M. Trook, B. C. Dale, C. J. Overman, J. F. Loomis, C. B. Vigus, J. D. McKay, A. T. Davis, A. A. Hamilton, V. V. Cameron, J. Maurer, W. A. Fankboner, N. B. Powell, G. R. Daniels, G. D. Kimball and J. E. Johnson. Guests: Dr. Jones of Fairmount and Dr. Daniels of LaFontaine. J. E. JOHNSON, Secretary.

HANCOCK COUNTY

The Hancock Medical Society held its regular meeting at the Columbia Hotel, Greenfield, November 12.

This was an open meeting, to which every physician who practices in Hancock County was invited. A large number responded to the invitation, and after a buffet luncheon, the meeting was called to order by Vice-President E. R. Sisson.

On motion and vote, Dr. Charles A. Barnes, now of Tacoma, Wash., who has for many years been an honored member of this society, was unanimously elected

to a life-time honorary membership in token of the high esteem in which he is held and the work he has done in the past.

An auditing committee was appointed as follows: Drs. Justice, Milo Gibbs and C. K. Bruner.

The following officers were elected for 1915: president, Paul E. Trees; vice-president, Ernest R. Sisson; secretary-treasurer, Joseph L. Allen; censor for three years, Jesse E. Ferrell.

The society voted to continue meetings every other month next year.

J. L. Allen gave a short talk on the filling of statistical report blanks.

Communications calling attention to clinics at Central Hospital for Insane read.

Dr. A. W. Brayton gave a short talk on the "Things Worth While."

The physicians present then took up the discussion of a fee bill and the equalization of fees and other items relative to the business side of the physician's life. A fee bill, together with a signed agreement, was adopted.

Adjourned. Joseph L. Allen, Secretary.

HENRY COUNTY

At a recent meeting of the Henry County Medical Society the following officers were elected for the year 1915: President, L. F. Thompson, Newcastle; vice-president, R. L. Lee, Lewisville; secretary-treasurer, George H. Smith, Newcastle.

George H. Smith, Secretary.

HOWARD COUNTY

The regular meeting of the Howard County Medical Society was held December 4. The roll was called and the following members were present: Adams, Anderson, Hamilton, Harrison, Knepple, W. J. Martin, Meiner, H. C. Miller, Murray, Peters, Powell, Puckett, Schuler, W. I. Scott, Shoaf, Shenk, Smith and Wright.

Minutes were read and approved.

Dr. Knepple, chairman of the program committee, made a brief report regarding the banquet that will be held by the society, Thursday evening, December 10.

Motion made that we invite the janitor, Mr. Amos, to the banquet. Carried.

Motion made that we invite Dr. Foreman to read his paper before the society at some future date. Carried.

Motion carried that incoming secretary interrogate each member who does part of poor practice, regarding work done by each one and present data to trustee.

Motion carried that the secretary keep a register of nurses, complete in every detail.

Motion carried that a certain reasonable number of reference works be purchased each year and medical magazines of merit be subscribed for and placed in the Carnegie library.

The following officers for the ensuing year were elected by unanimous vote: President, T. C. Cochran; vice-president, Wm. H. Harrison; secretary-treasurer, R. P. Schuler; censor, D. C. Peters.

Adjourned. Lamarr Knepple, President.
C. J. Adams, Secretary.

LAKE COUNTY

The annual meeting of the Lake County Medical Society was held at the Hammond Country Club, Friday, December 11, at 6:30 p. m., President J. W. Iddings presiding. Twenty-five members were present.

Dinner was served at 7 p. m., after which the president's address was read, followed by the secretary's report.

1914 proved to be the banner year of this society, as is shown in the following comparative record:

	1913	1914
Members	84	94
Meetings	11	12
Maximum attendance	22	36
Minimum attendance	9	16
Average attendance	15	27⅔
Papers presented	9	16
Case reports	16	17
Bulletins issued	11	12
Journal reports	11	12
Councilor visits	0	1

In the election of officers for 1915, Drs. Iddings and Shanklin were reelected as president and secretary, respectively. Dr. A. J. Lauer was elected vice-president; Dr. A. A. Ross, censor, and Dr. Ira Wiltimore as essayist for the September meeting, set apart for the oration in medicine. Drs. H. E. Sharrer, E. E. Evans and J. E. Metcalf were chosen as delegates to the Indianapolis meeting of the State Association. This means that we must increase our membership to more than the century mark, but we expect to make good.

The secretary suggested that assistants be selected to aid in increasing our membership, getting out the *Bulletin*, and in such other work as might be assigned to them. On motion, the president made the following appointments: Lowell, J. W. Iddings; Crown Point, J. T. Gibbs; Whiting, A. J. Lauer; East Chicago, S. M. Goldberger; Indiana Harbor, J. A. Teegarden; Hobart, C. C. Brink; Gary, E. E. Evans; Hammond, W. F. Howat.

On motion of Dr. Metcalf, Drs. Gibbs, Metcalf and Nesbit were appointed to appear at the January meeting of the county council, urging the appropriation of a sufficient sum to begin the erection of a tuberculosis hospital.

Adjourned. E. M. Shanklin, Secretary.

MADISON COUNTY

Madison County Medical Society met in public library in Anderson, Tuesday, Dec. 22, 1914, at 4 p. m., President S. C. Newlin in the chair. Seventeen members present. Minutes of previous meeting read and approved.

Society proceeded to the election of officers for ensuing year, which resulted as follows: president, Dr. W. W. Kneale, Anderson; vice-president, Dr. E. M. Conrad, Anderson; secretary-treasurer, Dr. J. M. Stoddard, Anderson; censor, Dr. J. Stewart, Anderson.

Dr. S. C. Newlin then gave his address. He said in part: "The destiny of the medical profession is truly grand and glorious; if it proceeds as its progress indicates, what a wondrous spectacle the present century will exhibit. The demands of the present age are to be peculiarly useful, to measure everything by its ability to contribute to the general welfare of the people; and this is equally true of the world of

science and art. In the social and moral world the value of the discoveries and inventions depends on their capacity to facilitate business, save labor and render it easier, while the improvements are adopted or rejected, as they are or are not suited to the intellectual and moral wants of society. At the present age no institution can expect to flourish unless it breathes the spirit of the age and keeps pace with the rapid strides of science in its onward march. To notice the activity in pathological investigation and the methods of treating diseases, one might think that the greatest progress was being made in medicine, but such is not the fact by any means. The advance that is being made in prolonging life is largely in favor of the progress made in preventing diseases. The profession understands far better at this time the causes of disease and how to get rid of those causes than ever they did; and it is undoubtedly largely owing to this more perfect knowledge that the average duration of life has been set forward several years. Epidemics that used to sweep the earth, decimating the inhabitants, are either robbed of their terrors or no longer prevail. Many inhabited places noted for their insalubrity in former times are now as healthful as other localities, all of which inures to the honor and self-sacrifice of our profession, but is detrimental to its financial gain. It is my hope and my prayer that our profession and our country may continue as they have advanced, hand in hand, until they have reached the highest pinnacle of human greatness."

ETTA CHARLES, Secretary.

MARSHALL COUNTY

The Marshall County Medical Society met at Clifton's Hall, Plymouth, December 31. Meeting called to order by President D. T. Eley. Fourteen members present.

On unanimous vote the meeting night of the society was changed from the last Thursday in the month to the second Tuesday of each month. Meeting for January was canceled and members urged to attend the meeting of the Tri-State Medical Association at Elkhart on January 12.

The following officers were elected for 1915: President, C. E. Nusbaum; vice-president, J. M. Edison; secretary-treasurer, Harry Knott; censor for three years, H. P. Preston.

The outgoing president, Dr. L. D. Eley, gave each member the privilege of a five-minute talk on topics "for the good of the society."

Adjourned. HARRY KNOTT, Secretary.

MONTGOMERY COUNTY

The Montgomery County Medical Association met in regular session Tuesday, December 15.

Dr. Thomas L. Cooksey read the paper of the evening.

The following officers were elected for the coming year: President, J. L. Beatty; vice-president, F. A. Dennis; secretary-treasurer, Thomas L. Cooksey; board of censors, Paul Barcus, W. F. Batman and N. A. Cary.

Special efforts are to be made to enlist more of the profession in the association work, increasing attendance and interest the coming year.

Adjourned. THOMAS L. COOKSEY, Secretary.

SPENCER COUNTY

The Spencer County Medical Society met in regular session at Rockport, Dec. 15, 1914, and elected the following officers for the coming year: president, Dr. J. C. Jolly; vice-president, Dr. J. C. Glockman; secretary-treasurer, Dr. H. Q. White; censor for three years, Dr. G. B. DeTar.

Report of secretary read and approved.

It was suggested that each member try to bring in a clinical case each time a meeting was held in his town.

The matter of a fee bill was brought up, but it was voted that this be made an order for January meeting.

Moved and seconded that all retired doctors be invited to attend the next meeting of this society.

Drs. H. G. Weiss and S. C. Long were appointed to confer with Representative-Elect McCollough to see that no legislation be enacted that would interfere with the doctor in prescribing his own drugs.

Dr. J. C. Jolly spoke on "Are Our Services Worth the Price?" His thought was that in cases where medicines would not better condition of patient that we should not make a full charge; only for the first two or three visits. Also that insurance companies should not expect us to leave office and make examinations for less than a professional call is made.

Dr. H. G. Weiss spoke a few minutes on what the Tuberculosis Society is doing, after which a number of physicians joined in the discussion.

Adjourned. H. Q. WHITE, Secretary.

WELLS COUNTY

The Wells County Medical Society met in regular session at the offices of Dr. S. A. Shoemaker at Bluffton and elected the following officers for the coming year: President, L. A. Spaulding; first vice-president, D. C. Wyburn; second vice-president, I. N. Hatfield; secretary-treasurer, S. A. Shoemaker; censor, J. W. McKinney; delegate to state convention, L. H. Cook; alternate, I. N. Hatfield.

After election, Dr. Will Shimer of Indianapolis gave a lecture on "Contagious Diseases," reporting recent investigations and examinations in the laboratories, and discussing mainly diphtheria, small-pox and typhoid fever.

The meeting ended with a banquet.

Adjourned. S. A. SHOEMAKER, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

PASTEUR ANTIRABIC VACCINE.—The virus is prepared according to the method of the Hygenic Laboratory, Washington, D. C. A dose is sent by mail each day. Twenty-one to twenty-five doses constitute a treatment. Laboratory of W. T. McDougall, Kansas City, Kansas.

SOLUTION PITUITARY EXTRACT.—A solution of purified extract of the posterior lobe of the pituitary gland

of the ox. It is assayed so that 1 c.c. represents 0.2 gm. fresh gland. It is used by hypodermic or intramuscular injection mainly to stimulate the uterus contraction in labor. It is supplied in the form of Ampules containing 1 c.c. Solution Pituitary Extract. The H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, Dec. 5, 1914, p. 2043).

Radium Bromide.—The market supply is a mixture of radium bromide and barium bromide and is sold on the basis of its radium content. It is sold for use in applicators, inhalatoriums and injection solutions. Radium bromide is marketed as:

Radium Bromide, Radium Company of America.—All deliveries are made subject to the test of the U. S. Bureau of Standards or any reputable expert designated by the purchaser. The Radium Company of America, Sellersville, Pa.

Radium Bromide, Standard Chemical Co.—Sold by the Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, Dec. 26, 1914, p. 2289).

Radium Carbonate.—The market supply is usually a mixture of radium carbonate and barium carbonate and is sold on the basis of its radium content. It is sold for use in applicators. Radium carbonate is marked as:

Radium Carbonate, Standard Chemical Co.—Sold by the Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, Dec. 26, 1914, p. 2289).

Arbutin, Merck.—This brand of Arbutin has been accepted for inclusion with New and Nonofficial Remedies. Merck & Co., New York.

Radium Chloride, Radium Co. of America.—This form of radium chloride has been accepted for inclusion with New and Nonofficial Memedies. Radium Co. of America, Sellersville, Pa.

Radium Sulphate, Radium Co. of America.—This form of radium sulphate has been accepted for inclusion with New and Nonofficial Remedies. Radium Co. of America, Sellersville, Pa. (*Jour. A. M. A.*, Dec. 26, 1914, p. 2290).

Cupric Applicators (Copper Sulphate 20-25 per Cent.).—Wooden sticks 6½ inches long tipped with a mixture of copper sulphate, alum and potassium nitrate, containing 20 to 25 per cent. copper sulphate. Antiseptic Supply Co., New York (*Jour. A. M. A.*, Dec. 26, 1914, p. 2290).

PROPAGANDA FOR REFORM

Alborum.—Alborum is sold by the Whitehouse Chemical Co., Lynchburg, Va., and is stated to contain boric acid, alum, phenol and oil of peppermint, the amounts not being declared. This preparation lacks originality and is unscientific. Its exploitation being held contrary to the best interests of the public and the profession, Alborum was refused recognition by the Council on Pharmacy and Chemistry (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

Betul-ol.—Betul-ol is a methyl salicylate preparation advertised by E. Fougera & Co., New York, to physicians and, indirectly to the public, as an external analgesic and antirheumatic. It was refused recognition by the Council on Pharmacy and Chemistry because the statements regarding its composition are vague, misleading and incorrect, because unwarranted therapeutic claims are made for it, because the recommendations are likely to lead the public to the self-treatment of rheumatism, with serious consequences (*Jour. A. M. A.*, Dec. 12, 1914, p. 2148).

Cystogen, Cystogen Aperient and Cystogen-Lithia.—Cystogen is the therapeutically suggestive name applied to hexamethylenamin, by the Cystogen Chemical Company, St. Louis, Mo. By means of extravagant claims, unwarranted assertions and pseudo-scientific arguments the Cystogen Chemical Company advises the use of Cystogen Aperient or Cystogen-Lithia or all three in a well nigh endless number of diseases. The promoters take good care that every Cystogen prescription is likely to spread the Cystogen gospel among the people. In announcing the rejection of these products the Council on Pharmacy and Chemistry calls attention to the conservative discussion of hexamethylenamin which appears in its publication "Useful Drugs" (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

Cysto-Sedative.—Cysto-Sedative (Strong, Cobb & Co., Cleveland, Ohio) is said to contain thuja occidentalis, pichi, saw palmetto berries, triticum repens and hyoscyamus. Cysto-Sedative was refused recognition by the Council on Pharmacy and Chemistry because unwarranted and preposterous claims were made in regard to its preparation and because unwarranted therapeutic claims were made for this unscientific mixture (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

Ergoapiol.—Ergoapiol (Martin H. Smith Co., New York) is a mixture put up in capsules, each of which is said to contain, Apiol (Special M. H. S.) 5 gr., Ergotin 1 gr., Oil Savin ½ gr., Aloin ⅛ gr. Examination indicated that each capsule did not contain 5 gr. apiol but an oleoresin of parsley seed. The recommendations in the advertising matter invite its indiscriminate use. The Council on Pharmacy and Chemistry refused to recognize this unscientific mixture of ingredients which has widely differing therapeutic effects (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

Apergols.—Apergols, put out by H. K. Wampole Co., Inc., is apparently an inversion of the name Ergoapiol and the preparation appears to have essentially the same formula. In general the claims made for Apergols are the same as those made for Ergoapiol. The Council refused admission to Apergols because they are advertised indirectly to the public, because of unwarranted therapeutic claims, because of the non-descriptive name and because the product is unscientific (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

Gastrogen Tablets.—These tablets, recommended by the Bristol-Myers Co., New York, to be used in connection with its other nostrum, Sal Hepatica, are said to contain pepsin, calcium carbonate, calcium phosphate and "aromatics." As patients who need an antacid do not need pepsin and vice versa the preparation is unscientific and the therapeutic claims made for it unwarranted. Gastrogen tablets were refused recognition by the Council on Pharmacy and Chemistry (*Jour A. M. A.*, Dec. 12, 1914, p. 2149).

Iodalia.—Iodalia (Geo. J. Wallau, Inc.) is claimed to be a valuable substitute for iodides. Examination in the A. M. A. Chemical Laboratory indicated that when administered it would act like ordinary iodides and that to obtain the equivalent of 20 gr. potassium iodide it would be necessary to give the contents of a one dollar bottle of Iodalia. Particularly reprehensible among the many unwarranted claims made is one which suggests to the public that Iodalia will protect against infectious diseases. The Council voted that Iodalia be refused recognition (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

IODOTONE.—Eimer & Amend, who market Iodotone, state that it is a glycerin solution of hydrogen iodide, containing 1 gr. iodin to each fluidram. While Iodotone must act like ordinary iodides and while nearly one ounce of glycerin must be swallowed to obtain the equivalent of 10 gr. potassium iodide, the unwarranted claims are made that Iodotone is superior to iodides. Because of misleading claims and because the name Iodotone is likely to suggest its use as a general tonic, Iodotone was refused recognition by the Council on Pharmacy and Chemistry (*Jour. A. M. A.*, Dec. 12, 1914, p. 2149).

NOURRY WINE.—This wine, sold by E. Fougera & Co., is said to contain 12 per cent. alcohol and 1½ gr. iodin to the fluidounce in combination with tannin. Examination in the A. M. A. Chemical Laboratory showed that its action would be that of ordinary iodid and that the non-production of iodism is due to the small amount of iodin it contains. Claims are made which are prone to lead to its use both by the profession and the public in conditions in which effective medication is called for. The Council on Pharmacy and Chemistry refused recognition to Nourry Wine (*Jour. A. M. A.*, Dec. 12, 1914, p. 2150).

WARNER'S SAFE REMEDY.—"Warner's Safe Remedy for the Kidneys and Liver and Bright's Disease" is reported by the A. M. A. Chemical Laboratory to contain alcohol, by volume, 14.40 per cent., glycerin, by weight, 7.72 per cent., potassium nitrate 1.75 per cent. and vegetable extractives. This preparation consists essentially of alcohol and potassium nitrate. Alcohol is contra-indicated in inflammatory diseases of the kidneys and potassium nitrate is a kidney irritant. Sufferers from kidney diseases who take Warner's Safe Remedy will shorten their lives (*Jour. A. M. A.*, Dec. 19, 1914, p. 2246).

CYPRIDOL CAPSULES.—Cypridol capsules, sold by E. Fougera & Co., New York, are stated to contain mercuric iodide dissolved in oil. The Council on Pharmacy and Chemistry refused recognition to Cypridol capsules because they were sold under unwarranted therapeutic claims and because they were marketed in a way to appeal to the public. If the capsules are once prescribed the directions on the bottle and the full instructions for the treatment of syphilis which accompanies the bottle is likely to lead the patient to attempt to treat his malady on his own accord and thus probably forfeit his chances of a cure. Physicians who want to use a solution of mercuric iodide in oil, should have their pharmacist prepare it for them (*Jour. A. M. A.*, Dec. 19, 1914, p. 2247).

INTESTINAL ANTISEPTIC W-A.—The Abbott Alkaloidal Co., advertises Intestinal Antiseptic W-A as " . . . A scientifically blended and physiologically adjusted mixture, of the pure sulphocarbolates of calcium, sodium and zinc, grs. 5, with bismuth subsalicylate, gr. ¼ and aromatics." The Council on Pharmacy and Chemistry refused recognition to this proprietary because the formula does not indicate the proportionate amounts of the several sulphocarbolates, because the name is therapeutically suggestive and an invitation for the use of the preparation by the public and because exaggerated therapeutic claims are made for it. The claims which are made are most extreme; they contrast sharply with the low esteem in which the phenolsulphonates (sulphocarbolates) are generally held. It does not appear that the claims have been substantiated by proper evidence (*Jour. A. M. A.*, Dec. 19, 1914, p. 2247).

KELLER'S TUBERCULIN TEST PLATE.—This appears to be an attempt to exploit the Moro tuberculin ointment. The test does not discriminate between active and latent tuberculosis. As most adult persons have experienced tubercular infection at some time in life, a large majority of persons will respond positively to the test (*Jour. A. M. A.*, Dec. 19, 1914, p. 2250).

BOOK REVIEWS

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL in Philadelphia. Volume XI. Philadelphia: Press of Wm. J. Dornan, 1914.

This book gives the detailed report of the Episcopal Hospital for the year 1914. This occupies about one-fourth of the book. The remaining three-fourths of the book contains original articles and case reports by members of the staff. Naturally a wide range of subjects is covered. It is to be hoped that some of these articles at least have been published in medical journals where they will be accessible to medical men who have not a direct personal interest in the Episcopal Hospital. The volume is good evidence of this excellent and industrious work of the Episcopal Hospital staff.

A TEXT-BOOK OF MEDICAL DIAGNOSIS.—By James M. Anders, M.D., Ph.D., LL.D., and L. Napoleon, A.M., M.D., Boston. Second edition, thoroughly revised, with 500 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Price, $6.00.

The advances of the past three years that have elapsed since the first edition of this work fully justifies this edition of a valuable book.

As the title indicates it is a text-book of medical diagnosis. The association of Drs. Anders and Napoleon is particularly fortunate in writing a book of this kind, for the reason that the clinical side of diagnosis is given the great prominence it deserves and at the same time the really valuable laboratory data are presented at their true worth.

The general plan followed is to give first a brief clinical picture of a given disease, a paragraph on pathology, exciting and predisposing factors, the laboratory diagnosis and the clinical course. The devoting of considerable space for a full discussion of the "Principal Complaint" is an exceedingly happy method of presenting diagnosis from the clinical standpoint. Among the new important revisions in this edition are the sinus irregularities, blood pressure and ulceration of the duodenum.

One hesitates to make minor criticisms of a work of so much value, but there are a few changes that might well be made. The reader is led to infer that a tracing of the radial pulse alone is of value in diagnosis. The sphygmograph is mentioned, but no reference is made to a work where the tracings of a combined jugular and radial pulse may be interpreted. The Cammidge reaction has not established for itself a place in diagnosis. The reader is led to infer that Vincent's angina is usually accompanied by a stomatitis. The work is very well illustrated and a number of valuable differential diagnostic tables are given.

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ORIGINAL ARTICLES

AIDS TO DIAGNOSIS IN PELVIC INFLAMMATIONS IN WOMEN *

ADA E. SCHWEITZER, M.D.
Assistant Bacteriologist, Bacteriological Laboratory, Indiana State Board of Health
INDIANAPOLIS

Pelvic inflammations include all inflammatory conditions of the pelvic tissues and organs. The primary or idiopathic form is rare. Secondary manifestations resulting from extension of inflammation of organs covered by the peritoneum, or from adhesions are more frequent. So common are these affections that their prompt recognition by the physician might be taken for granted were it not for the fact that many cases are diagnosed so late as to render any remedial measures futile. Early diagnosis followed by intelligent treatment would result in the restoration to a practically normal condition of many women who later face the alternative of a mutilating operation or chronic invalidism with possible untimely death in either case.

Primarily the importance of eliminating a psycho-neurotic origin of the ailment is obvious. Possible hereditary tendencies or defects may be discovered by a careful analysis of family history. The personal history of the patient, her age and civil condition, together with her mental attitude, her posture and her unconscious facial expression may enable the physician to differentiate between symptoms due to abnormal mental states of hysteria[1] and those due to some actual systemic lesion. Again in a neurasthenic patient the location of a pain will be variable; in one place to-day, as in the shoulder, and in some other remote place tomorrow, as in the ovarian region or in the sole of the foot. Complaint of a definite pain, constant as to locality, over a considerable period of time will give assurance that some gross pathological lesion is responsible for it. Oldfield[2] holds that pelvic disorders have no specific action in causing neurasthenia, that pelvic complaints, with the exception of disorders of menstruation, are not infrequently unassociated with physical signs and are due to a general neurasthenia. The significance of this distinction is manifest,[3] for when the idea of disease fastens itself on the hysterical patient her case is hopeless until some kind providence fixes the mind on an incompatible idea. A complete readjustment of mental habits and an education of the will to a tolerance of the disagreeable is often necessary to effect a cure.

If, however, one is able to eliminate hysteria he may proceed with some degree of confidence to employ other diagnostic measures. Careful physical examination supplemented by the ability to distinguish the pathological entity found, and the employment of all available chemical, bacteriological or serological tests may substantiate a diagnosis or ultimately may leave one still in doubt as to the precise lesion present.

Physical examinations should be made promptly and in selected cases under anesthesia that the exact condition of the pelvic organs may be ascertained.[4] Bimanual examination often reveals the presence of unsuspected lesions. When present, the symptoms of more intense pain and localized tenderness together with greater density of adhesions at a given point aid in locating the site of the lesion. This original focus may be irreparably injured while the surround-

* Read before the Indiana State Medical Association, at Lafayette, Sept. 24, 1914.

1. Mullan, E. H.: Mental Hygiene, *U. S. Public Health Reports*, 1914, xxix, No. 4.

2. Oldfield, E.: Some Pelvic Disorders in Relation to Neurasthenia, *Practitioner*, London. Abst., *Jour. Am. Med. Assn.*, 1913, October, lxi, No. 14, p. 1331.

3. DuBois, Paul. The Psychic Treatment of Nervous Disorders, Chap. 3, p. 35.

4. Kelley, H.: Pelvic Inflammatory Disease, Medical Gynecology, 1909, Chap. 14, p. 317.

ing organs affected only by bands of adhesions may be temporarily impaired as to function, though structurally they are intact.

In the non-sensitive affections the patient is often unaware of any pelvic disease until some irregularity of function presents itself. Notwithstanding the relative infrequency of a non-infectious source of these conditions its possibility must be considered. It may be some irritating chemical secreted by the tubes or ovaries or it may be some foreign body. In the case of a tubal hematocele or the rupture of an extensive hematoma due to diseased corpora lutea the effused blood acts as the disturbing agent. Extra-uterine pregnancies, tumors, and foreign bodies left in the pelvic cavity after operation may be exciting factors. Congestions due to the chronic impaction of feces also may be considered.[5] Pelvic varicocele or varicocele of the broad ligament consisting of a more or less permanent dilatation of the veins of the pampiniform plexus may give rise to symptoms common to the foregoing disorders.

The more frequent infections are those due to the gonococcus, the streptococcus and staphylococcus, the colon bacillus, the tubercle bacillus and the micrococcus lanceolatus. Other organisms acting as causative agents are bacillus proteus, *B. pyocyaneus, B. aerogenes capsulatus* or *B. typhosus.*

Infections due to the gonococci occur more commonly in married women than in the unmarried, affect the young with greater severity, and spread in a characteristic manner. The classical symptoms, with a history of recent marriage to a man with a record of an antenuptial infection or of extra marital exposure, may confirm the diagnosis in the physician's own mind, but a positive laboratory finding will furnish irrefutable evidence as to the nature of the infecting agent.

The classification and pathology of these disorders, according to Crossen,[6] is as follows: Originating in the external genito-urinary organs the infection extends by way of the uterine mucosa through the Fallopian tubes to the peritoneum and contiguous structures, producing gonorrheal abscesses in the tubes and ovaries, and pockets of pus limited by bands of adhesions in the pelvic cavity.

In the puerperal invasions of the staphylococcus and streptococcus, the advance is by way of the lymphatics through the endometrium to the connective tissue, or through the thrombosed sinuses of the puerperal uterus to infective thrombosis of the broad ligament veins.

If the infection enters through the upper part of the uterus it affects the ovarian veins in the upper part of the broad ligament. If from the lower part, the uterine veins are infected in the lower part of the broad ligament. From here, unless checked by nature's efforts it may extend centrally along the ovarian veins to the vena cava, or along the uterine veins to the internal iliac, the common iliac, and finally to the vena cava. In the common iliac the process may extend downward along the external iliac vein, producing external iliac thrombosis or milk leg. General pyemia may result, or infective thrombosis of the lung may occur from the lodgment of metastatic emboli.

Marvel[7] reports five cases of puerperal infection due to bacillus aerogenes capsulatus. Diagnosis is important because of the grave menace to life. Symptoms are characteristic; rapid pulse, extreme pallor of the vagina and other mucous surfaces, with temperature not in proportion to extreme prostration. On operation malodorous gas is released from the tissues. Cultures show the gas bacillus.

In mixed infections or in disturbances resulting from intestinal perforation or ruptured vermiform appendix the colon bacillus is often found.

The process in any case may be acute or chronic. The former may be the direct result of gonorrhea, abortion, labor, or instrumentation. Undiagnosed mild gonorrhea, incomplete "cures," crude methods of the abortionist, the surgically "unclean" leper of an obstetrician who infects his patient by detaching the placenta with dirty finger nails, the trauma[8] due to unnecessary and unskilful instrumentation, all are responsible for a long train of pelvic disasters.

In the acute inflammations symptoms of chill, marked rigor, rise of temperature with vomiting and intense abdominal pain are so severe as to demand prompt attention. The abdomen is rigid, distended, tympanitic, the patient is lying on her back with her knees drawn up; respiration is costal and any effort involving a movement of the diaphragm is avoided. Scanty, high colored urine may be passed frequently, containing an excess of indican. The hippocratic ex-

5. Darnall, Wm. E.: Pelvic Varicocele, *Jour. Am. Med. Assn.*, 1914, August, lxlii, No. 5, pp. 391-395.

6. Crossen, H. S.: Pelvic Inflammation, Diagnosis and Treatment of Diseases of Women, p. 691.

7. Marvel, E.: Puerperal Infections Due to Gas-Forming Bacilli, *Am. Jour. Obst.*, New York, 1914, lxix, 100-108.

8. Benjamin, A. E.: Some Intra-Abdominal Complications following Laparotomies, *Jour. Am. Med. Assn.*, 1913, December, lxi, No. 23, p. 2045.

pression is marked. If the inflammatory process is walled off by adhesions a localized peritonitis may result. This is likely to be obscured and the prognosis depends on early recognition and operation. The area of pain is usually low in the pelvis and not larger than the palm of the hand. If on the right side there may be some doubt as to whether one is dealing with ovarian disease or appendicitis.

Evidences of appendicitis should be looked for in young adults; puerperal infection, gonorrhea, salpingitis, ovaritis or pelvic abscess in married women; and walking typhoid with perforation in young and vigorous persons.

Several varieties of chronic peritonitis are recognized; adhesive, proliferative in which the peritoneum is thickened, cancerous, tuberculous and hemorrhagic. The large proportion give rise to no symptoms. Pain when present is usually greater during the pelvic congestion incident to menstruation. In more pronounced cases it is practically continuous, in others intermittent. Fever is usually though not always present when there is pus in the abdomen. In severe cases the temperature may be subnormal though it usually varies from a slight elevation to 105 F. In recent cases or in acute exacerbation of an old case a blood-count would show an increase in leukocytes from 8,000 to 19,000 or to 30,000 or more. Both leukocyte count and temperature are likely to be higher in puerperal streptococcus cases than in infections due to the gonococcus.

The recognition of the various pathological changes found in infections varying from a mild salpingitis to a diffuse peritonitis not only aids in diagnosis but also indicates in some measure the treatment which should be instituted.

In mild salpingitis the inflammation is slight. There is some hardening and thickening of the wall accompanied by round-cell infiltration. A few of the fimbria are bound together. Both ends of the tube are open. In the more severe cases both ends of the tube are occluded. The tube is distorted and adherent to the ovary. Not much fluid is present.

In salpingitis with exudate there is a large amount of fluid, no pus and the organs are firmly bound together by adhesions. Pyosalpinx shows the tube distended with pus but none outside; exudate may or may not be present. Infection may localize in one or both ovaries.

Diffuse suppurative peritonitis well illustrates nature's attempt at conservation of infected tissues. Always in advance of the spreading infection is the extension of the fibrinous exudate before it, shutting it off from the peritoneal cavity. The process may result in abscesses low in the pelvis which may be reached and evacuated from below or it may extend until all the pelvic organs are bound together in an irregular mass, pus lying in the spaces between and burrowing into the connective tissue. Old lesions are present.

Acute diffuse peritonitis spreads so rapidly that not much limiting exudate is formed, it quickly involves the general peritoneum and usually ends fatally. It may follow severe sepsis of labor or abortion.

Cellulitis or lymphangitis of connective tissue about the uterus is rarely due to the gonococcus alone but also to streptococcus, staphylococcus or colon bacillus. It is favored by deep laceration and may result in resolution, abscess or in general sepsis.

Septic thrombosis arises from the infection of normal thrombi filling the uterine sinus after labor and may constitute a severe and fatal puerperal sepsis. In the effort to limit the infective and destructive process to the sinus or vein, nature causes another thrombus to form proximal to the infective one, a process which may go on as long as each thrombus in turn becomes infected.

Blood cultures or cultures from spinal fluid may show the organism responsible for the trouble in puerperal cases.[9] Microscopic examinations of the lochia are of value only when specimens are aseptically prepared. In acute gonorrhea the characteristic diplococcus is practically always found in moderately thin smears on glass made from pus expressed from the urethral, vulvovaginal or from the cervical glands. These from their anatomical position are the parts usually infected. Smears from vaginal discharges in the adult are practically worthless; first, because the gonococcus does not find in the acid secretions of the vagina a suitable habitat, and, second, because the infinite variety of bacteria in the vagina flora render differential diagnosis difficult. Cervical specimens should be taken through a speculum after thoroughly cleansing the external os uteri. At least two films should be prepared that the gram differential stain may be compared with the specimen stained with the Loeffler's alkaline methylene blue. Cultures may be grown on ascites agar or

9. Watkins, T. J.: Puerperal Infection, *Am. Jour. Obst.*, 1913, September, lxviii. No. 3, pp. 462-469.

in freshly sterilized veal bouillon to which hydrocele fluid has been added.

Hauser[10] calls attention to the fact that the general or focal reaction to gonococcus vaccine is important in differential diagnosis of gynecological affections. He always found the reaction positive in recent gonorrheal cases with gonococci, and constantly negative when gonorrhea could be positively excluded. He found a positive focal reaction the chief criterion. Outside of typical groups the reaction was misleading in only 9.5 per cent. of the total number of cases. The negative reaction does not exclude gonorrhea, as the reaction may have been hindered by mixed infection, or the dose may have been too small or the lesion too old to react. Though his experience with the vaccine therapy has been favorable, he warns that it is far from being absolutely harmless and should be applied only under constant medical control.

The Wassermann test aids in diagnosing obscure syphilitic pelvic lesions. A complement-fixation test has recently been devised quite similar in principle to the Wassermann test in which a polyvalent gonococcus antigen is used with blood from the patient and the occurrence of hemolysis is noted. This is valuable in all latent cases, especially in cases of pregnant women in determining a cure in stages where micro-examinations are negative. Though much work is being done and many preliminary reports are being made the entire reliability of this test has not been fully established. Many feel that discrepancies in results are due to errors in technic and to variations in standards adopted by workers, for the test is a very delicate one and requires absolute thoroughness in preparation as well as in actual performance. The preparation of the antigen presents some difficulties. In women a positive reaction is probably not obtained unless there is at least some involvement of the cervix. The report by Thomas, Ivy and Birdsall[11] in *Surgery, Gynecology and Obstetrics* for September indicates the possible utility of this test.

In tuberculous process of the uterine adnexa tubercle bacilli are rarely found, though R. de Bovis[12] records positive findings in discharges from the uterus. He, however, lays particular stress on the fluctuation in the size of the tube due to transient congestions, the variation being from the size of an egg to that of an orange. The biologic tests may aid in determining the presence of this infection. General, local and focal reactions occur.

In the diagnosis of extra-uterine pregnancies and recent abortions a serodiagnosis test devised by Abderhalden is proving valuable in the hands of careful technicians.[13] This test is based on the consideration that when foreign proteins get into the blood, the body reacts by elaborating a ferment which causes their disintegration. The same reaction is believed to occur under the influence of certain peculiar protein substances derived from the organism itself. As elements from the placenta pass into the maternal blood the serum acquires the power to digest placental tissue. Application of this principle[14] is being made in diagnosis of syphilis and malignant growths, and in dementia praecox and other nervous disorders.[15]

Among others Ball[16] tested the serum of fifty patients for evidence of malignancy. Six cases clinically malignant gave positive results. Of twenty-eight suspiciously malignant conditions twenty gave positive reaction which later was verified—eight a negative reaction. Of fourteen clinically non-malignant, four which were pregnant were positive, the others negative.

Recent progress in laboratory diagnostic methods has been rapid. Until, however, uniform standards of technic are generally employed by laboratory workers, there will continue to be apparent discrepancies in results and confusion in their interpretation. Closer cooperation between the physician in the laboratory and the physician in general practice will result in proper preparation of specimens and in a scientific interpretation of findings. Finally, with the intelligent use of every available aid to diagnosis we may hope at length to see women, heretofore doomed to invalidism, arrive at the prime of womanhood in the full enjoyment of vigorous health.

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10. Hauser, H.: Value of Gonococcus Vaccine in Gynecology from Differential and Therapeutic Standpoints, *Archiv. für Gynakol.*, Berlin; Abst., *Jour. Am. Med. Assn.*, 1913, October, lxi, No. 15, p. 1410.

11. Thomas, B. A.; Ivy, R. M., and Birdsall, J. C.: Observations on the Gonococcus Complement-Fixation Test Employing Specific and Non-Specific Antigens, *Surg., Gynec. and Obst.*, 1914, September, xix, No. 3, p. 390.

12. Bovis, R. de: Diagnosis of Tuberculous Salpingitis, *Semin. Medicale, Paris*, 1913, September, xxxiii, No. 38, p. 445.

13. Fauser, A.: Serodiagnosis by Abderhalden's Technic, *Deutsche. Med. Wchnschr.*, 1913, Feb. 13; Abst., *Jour. Am. Med. Assn.*, 1913, March, lx.

14. Baeslack, F. W.: The Sero-Suzyme Test for Syphilis, *Jour. Am. Med. Assn.*, 1914, August, lxiii, No. 7, pp. 559-563.

15. Fisher, J.: Abderhalden's Serodiagnosis of Mental Diseases, *Deutsch. med. Wchnschr.*, Berlin, 1913, xxxix, No. 44.

16. Ball, C. F.: Abderhalden's Serodiagnosis of Cancer with a Tabulation of Results Obtained in Fifty Examinations, *Jour. Am. Med. Assn.*, 1914, February, lxii, No. 8, pp. 599-602.

BETTER OBSTETRICS *

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Since the foundation of the world there has been but one way for man to gain entrance into the world, and his egress from his mother's womb is a matter of no small importance to himself, and a momentous incident to his mother. The profoundest event in the life of any woman, the phenomenon compared with which all other really great events sink into utter insignificance, is the birth of her first baby; and it matters not whether she be a terrified girl of fifteen or a complaisant matron of forty.

Although man plays an essential part in reproduction it is rather trivial, for on woman is thrust 99 per cent. of the whole burden, and it goes without question that the woman who performs the important function of perpetuating the race is entitled to especial care and consideration in this her period of stress, and the knowledge of her requirements and the skilful application of this knowledge is embraced in the general term obstetrics. While I am willing to admit that this is a much discussed topic and that many words and much valuable time have been wasted thereon, I firmly believe we are now, as never before, appreciating the great importance of the subject.

In my humble opinion the pregnant woman is surrounded by a sacred atmosphere, and I hope the time may speedily come when every man who approaches the environs of a woman soon to become a mother will feel that he is treading on holy ground. The woman above all women entitled to the veneration of mankind is the one who carries within her own body the potential heir to a throne, no matter what or where that throne may be. Now, if the foregoing be true then it is also true that every resource available be placed within reach of the parturient woman and the most skilful service be performed, that she may be brought safely over this critical epoch.

I have always contended and have no occasion to change my mind now, that, other things being equal, a woman ought to be better mentally and physically, and should be happier and healthier after the birth of her first baby than before; and when the primipara does not work out according to this formula, it is due, in seven cases out of every ten, to the fact that the obstetrician has not had a chance or, having had a chance, failed through his ignorance or carelessness to do his full duty when attending a woman who has entrusted her immediate safety and future health and happiness to his supervision.

It is hardly necessary to remind this intelligent and progressive group of hard workers that there is nothing much more simple and easily managed than a normal case of labor; or that there is probably no instance in practice where the ingenuity, skill and common sense of the physician is featured as in the many complications that may accompany difficult, abnormal or pathological labor. We must always be on the alert, for oftentimes we have little or no forewarning, and judging from my own comparatively insignificant experience I believe that labor, normal in all respects, is becoming more and more rare each day.

Those of us who see many gynecologic patients in their various conditions and complicated train of symptoms realize what bungling work and make-shift methods some of us have been allowing to pass as competent obstetric practice. We all know it is difficult for a physician to show particular interest in a line of practice he does not like, therefore it is to be expected that there should be a wide difference in the systems and methods of obstetric procedure among physicians of the same community. My limited consultation work in the last ten years enables me to make this broad statement. While the older men are more resourceful and apt in their methods, the young men are much more careful of their technic and in their observance of aseptic precautions. As an illustration of the ability of older men I will cite an example; I was requested to assist a Delaware county physician do an instrumental delivery. When I arrived at the scene of operation the patient was lying lengthwise in the middle of a soft bed, and the physician was also in the same bed, on his knees at her feet, the forceps were applied and he was attempting, without assistance, to deliver her under the bed clothes. If you do not believe it takes skill to apply forceps under those circumstances just try it sometime. After some argument I gained this doctor's reluctant consent to put the patient on a kitchen table. Delivery was then easily and quickly accomplished.

Much of the cosmetic and actual gynecologic injury we find is due to damage done to the perineum or genital tract that has been allowed to go unrepaired. The physician who claims to have practiced for many years without allowing a perineal tear to occur is in the same class with

* Presented before the Indiana State Medical Association, at Lafayette, Sept. 24, 1914.

the one who says he has had so many years experience without a death, and they both belong to one of three groups.: (1) they had a very limited number of patients; (2) they managed to wiggle out of the case at the critical time, or (3) they are consummate prevaricators. Neither have I any confidence in the statements of an accoucheur who says he always gets a primary union as a result of his immediate repairs, for I know that it is an impossibility. I have seen many failures in the practice of good and careful men. We all have accidents, but my point is simply this, we should make every attempt within our power to leave a woman in as good condition as we found her, or not being able to do this, call in an assistant who can do all that is necessary under the circumstances. Only a short time ago I was consulted by a woman whose history led me to suspect a neglected perineal laceration, so I asked her whether she sustained any injury when her baby was born. She replied by saying that her physician had told her that she was not torn at all, yet when I examined her I found a gaping vagina and a considerable separation of the levator ani muscle. In fact a tear of the second degree. If her doctor had recognized this laceration and, recognizing it, had made honest efforts to repair it, he would have deserved credit for that much at least, but it is almost criminal to allow gross lesions to go ignored or undetected.

Now don't get the idea that I am trying to play the hero or "holier than thou" act, for I have some errors and shortcomings to my credit. I have neglected to repair a lacerated cervix that I now know should have been promptly sutured. I once allowed a woman to suffer five hours before I discovered that we had a posterior presentation with which to deal. I have punctured membranes when they had better been left alone. I used to puncture the membranes whenever I had an engaged head, a completely dilated cervix, good pains and no progress, no matter whether the patient was a multipara or primipara, but now I confine the operation to multipara with ample vulva outlet.

There are physicians to-day who make no pretense of cleaning the vulva or vagina before making a digital examination and who do not own a pair of rubber gloves. I was considerably amused over an experience I had last winter. I was called to see a woman in labor who had been in charge of another physician for several hours. When I was preparing to examine the woman I found a luxuriant growth of hair matted over and plastered to the vulva by dried and offensive secretions. I asked the doctor if he would not clip the hair and remove the excretions while I put on my gloves. He replied that women were peculiar and would not stand for such a thing. When I told him that I had been freely using scissors and sometimes a razor for several years, and had never met a serious objection, he simply said he had never found such a procedure necessary. I discovered also that this man seldom examined the mother's nipples, rarely investigated the postpartum condition of the cervix, never noticed whether the baby had an imperforate anus or a cleft palate unless his attention was called to it.

Dr. DeLee says: "The obstetrician must not alone be versed in his particular science and art, but he must be an internist, surgeon and pediatrist. The child too has its own physiology and pathology, therefore the borderlands of obstetrics with every other branch of medical practice are narrow and intimate." I have assisted a physician who said he never paid any attention to fetal heart sounds when deciding on a plan of action, and within the last six months I was with a physician of rather large experience who told me he had never heard fetal heart sounds.

The parturient woman, the mother of the family, is not the only one to be considered in the plea for better obstetrics; for whatever conduces to the maternal advantage indirectly benefits the infant. I believe we all come considerably short of our duty in our conduct of the puerperal period. It is not enough to lead a woman safely to the completion of her term, deliver the product of conception and then dismiss her after two or three perfunctory calls made during the following week. I know it is hard to keep a woman, who is subject to the more or less tender mercies of an incompetent set of neighbors, under our control during the convalescence, particularly when none of said neighbors are in sympathy with nor can appreciate "new-fangled" notions. In talking this matter over with one of our men who does considerable $10 straight obstetrics, he objected to my recommendations because he said he was now doing more than he was paid for. Now that is a good point. If you tell a benedict that his obstetric fee will be ten dollars, or that you charge ten dollars for confinements, and then realize that you have earned twenty dollars, you have no one but yourself to blame. We all know that a physician cannot do a version, deliver with forceps, replace a prolapsed cord, repair a laceration and make very many after calls all for ten dollars.

A feat of momentous importance will be accomplished when we have educated the public to the

extent that all pregnant women will realize that it is not only to their own interest, but that the best results may be obtained only by placing themselves under the direct supervision of the physician early in their term of gestation; for we know that in this way many grave complications may be prevented and this permits the early detection of pathologic conditions, enabling us to meet them in good time. How often we have been called to see a young primipara with constipated bowel, swollen legs, violent headache and other evidences of faulty elimination and improper hygiene. When we chide her for not securing professional advice sooner, she probably tells us that she supposed there was no help for her, or she reiterates the cruel lies kept in circulation by ignorant grannies that "all women must expect such things." One of the hardest fights I ever had with ante partum eclampsia was in a case where the young primipara had been gorging herself for the last months with rich and unsuitable food, because it was dinged in her ears from morning to night that she "must eat for two." When I saw her she had had no passage from the bowels for thirty-six hours; elimination had practically ceased and her face was bloated beyond recognition, but she was still eating for two. What are we going to do about it? I believe here, as I do in certain other matters, that an educational propaganda should be started. If the interested persons will not come to the trained, intelligent physician for advice and instruction we should in some way be able to get or carry the necessary information to them.

The more I see of institutional work the more I am convinced that a modern hospital is the ideal place for the parturient woman. If the women of the so-called middle class of our communities could be brought to realize the advantages of a maternity hospital as the poor in our cities know them, the public would not be long in making demands for accommodations and service. The very fact that a woman stands a much better chance of being discharged sound, well and happy is worth, in nearly every instance, the additional cost of ten days in an institution. The woman who is at the mercies of neighborhood grannies and officious friends ought to learn what attention a real nurse can bestow. This situation brings into view another advantage, in my opinion of great importance, obtained by confinement in a hospital, i. e., the opportunity of the puerperal woman to observe the manner in which she and her baby are cared for. Therefore, with the uncertainties attending, particularly a first labor, or in other cases where complicating conditions are present, the patient would be much better off in a hospital than to be confined in one of the houses or apartments in which of necessity such people are compelled to live.

The good obstetrician must be able to correctly interpret his findings. It is not enough to know that we have a contracted pelvis and the degree thereof, but we must know that a conjugata vera of less than 8 cm. will not allow a child of normal size to pass; and that in a justo minor pelvis a conjugate of at least 9 cm. is required. If a cesarean section is going to be at all necessary he should recognize the fact early and not make it an operation of last resort.

I will now devote a few words to some recommendations as to the conduct of a normal delivery. This probably can best be done by briefly outlining the method I try to follow and the armamentarium with which it is accomplished.

My obstetric outfit, always packed and ready for immediate use, is composed essentially of the following articles, presenting in the order named as the bag is opened. Crandal's obstetric cushion; sterile gown in cloth cover; sterile rubber gloves in towel; two or three dozen cotton pledgets sterilized in impervious paper wrapper; sterile towels in wrapper; all appliances necessary for the care of the cord, wrapped in a towel; packet for baby's eyes, containing two small squares of old linen, silver nitrate solution, dropper and bottle of boracic acid solution for final flushing; six combination vulvar pads made of cotton covered with gauze; a pair of non-sterile scissors, a bulb syringe and a catheter; a bottle of liquid soap and one of liquid petroleum or olive oil. The drug section contains ergot, veratrum, adrenalin, pituitrin, ether, chloroform, various hypodermic tablets and a quantity of lysol or its U. S. P. equivalent. Finally, in the bottom of the bag we have forceps, colpeurynter, sutures, needles, sodium tablets for making normal salt solution, strips of gauze and other emergency necessities.

When I am asked to attend a parturient woman I usually inform the interested persons that I will take a nurse with me. For this I seldom make an additional charge in the family of moderate means, explaining that her presence makes it much easier for me; takes less time and trouble when I have my own assistant than when I am compelled to depend on the questionable help of a chance relative or neighbor. If I send my assistant on in advance to a woman supposed to be in labor, she is instructed to prepare the patient for bed by removing all underclothing and putting on a clean gown. An enema is given

if the bowels have not moved during the last twelve hours. She now procures two wash bowls and prepares solutions of soap and lysol, on each of which are floating some of the cotton pledgets. The abdomen, vulva and adjacent parts are thoroughly washed with the soap solution (not scrubbed with bristles) and rinsed with lysol solution, and the vulvar hair clipped or shaved, as the case demands; the parts are again cleansed and a combination pad applied. If labor is not imminent the patient is allowed to assume any posture desired until I arrive, and my assistant proceeds to arrange the room and lays out in regular order the articles we will need in the process of labor and delivery.

When I reach the scene I make an external examination, including the fetal heart sounds. I think it is advisable to have the ear so trained that a stethoscope is unnecessary in ordinary cases. After learning all possible by external examination, I recleanse my hands, put on my gloves, remove the pad from the vulva, cleanse the vagina with pledgets from the bowls, make the internal diagnosis and act accordingly. As strict cleanliness is one of the secrets of success in obstetrics as well as in surgery, we should learn a practical routine and try to follow it in every instance. I do not assert that my way is the best way, and although it is satisfactory, it may not meet with your approval; but one can hardly do less without neglecting something of importance. In exceptional cases some lapses or breaks may inevitably occur, but these should be eliminated as far as possible and all details worked out in every instance. During the second stage of labor I have the patient across the bed, lying in the rubber pad covered by a sterile towel. The easiest way to drape a patient is with a sheet twisted on itself in the middle. I usually sit at the patient's right knee with a bowel of pledgets at my elbow. In this way we can keep the vulva, perineum and anus clear of any excretions and the progress of labor under our control. In encourage the woman to grasp her thighs under the knees and flex the thighs tightly on the abdomen during pains. I do not allow any "pulling parties," and I find that the fewer friends (?) in the room, the better we get along. I frequently make repair of the lacerated perineum while waiting for the expulsion of the placenta. I request the nurse to squeeze the clots out of the uterus and maintain a firm pressure. I free the vagina of blood and lightly pack with gauze or cotton, then suture the lacerations. I sometimes clamp the ends of the stitches and leave them untied, particularly the superficial rows and those of the fourchette, until after the placenta is expelled. This method has at least three points in its favor: It is a time saver, because of a slight numbness of the parts it can be done without anesthesia, and the sooner the repair is made the less the difficulty in rearranging the structures according to their original conformation.

I have always contended that the abdominal binder has no place on a recumbent woman. The time for a binder is before she goes to bed, and after she leaves it; therefore you may imagine my satisfaction in being able to quote the following from Dr. DeLee's magnificent new book: "Ancient custom prescribes the application of an abdominal binder directly post partum, but it does not prevent the uterus from rising in the belly or from bleeding, no matter how tightly applied. Some women desire the binder with a view to preserving the figure and preventing 'high stomach.' In the author's opinion the binder will do neither, but it may interfere with the passage of flatus and feces. After the patient assumes the erect posture the abdominal binder assists greatly." To all of which I heartily say "Amen." Williams of Johns Hopkins says: "Personally, I am not in favor of its employment and do not believe it serves any of the purposes for which it is recommended. On the other hand, I am strongly of the opinion that it occasionally gives rise to retrodisplacements, especially if it be applied snugly enough to exert compression."

Henry R. Donaldson, Atlanta, Ga., says: "The use of a tight abdominal binder, which also encourages retroflexion, should be forbidden."

The summing up is simply this: Have the parturient woman in the best possible condition for her ordeal and then qualify ourselves so that we can render her the best possible service. There is a vast difference between meddlesome midwifery and the spirit of inactivity that allows a woman to suffer for twelve hours when skilled assistance would end her trouble in thirty minutes; and only the knowledge born of experience will enable an accoucher to keep out of the unduly officious class without allowing himself to become justly censured for gross negligence. Time limits judged by hours and minutes are not scientific. Conditions should inspire our acts regardless of the hands of the clock. Dr. James W. Markoe of the New York Lying-In Hospital says: "A fetal heart which shows that a child is suffering and is liable to succumb, or a maternal condition which points toward exhaustion, hemorrhage or the like, are indications which must be cared for intelligently and not by any rule of time."

THE SERUM TEST FOR PREGNANCY *

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There is no question of more importance to the medical man or surgeon than that of diagnosis, and any test which can be relied upon, and which tends to make medicine an exact science, has in the past been eagerly received. A vast amount of work is being done, both abroad and in this country, to prove or disprove the reliability of the Abderhalden tests. Certainly if it is found that these experiments can be relied upon, a new era will be opened up in the practice of medicine, for not only can diagnosis be made more accurately, but without the familiar period of waiting.

Abderhalden claims that certain ferments are found in the blood, which are capable of digesting those substances which call them into existence. For instance, a dog is injected parenterally with some foreign matter, protein or carbohydrate, following which a proteolytic or amylolytic ferment appears in the blood stream capable of digesting this injected substance, either in vitro or in vivo. This ferment is not found in the blood of non-injected dogs, neither if protein is injected will it digest starch, and vice versa. It is claimed that it is not only specific, but that it is also protective; that is, its object is to protect the system from the possible toxic effects of this non-hydrolyzed material.

Moreover, this foreign substance does not have to be injected artificially, but may grow physiologically in the system, and this growth will produce its own ferment just as if it had been injected from without. Such an example is the placenta. As it grows in utero, there appears in the blood stream a ferment capable of digesting placental protein. If, therefore, the serum of a suspected animal be treated with placental protein, hydrolytic cleavage will take place, provided pregnancy exists. If pregnancy does not exist, there will be no cleavage.

These are the principles of the Abderhalden work, and all the tests for carcinoma, toxic goiter, dementia praecox, etc., are made upon these principles, the pregnancy tests having the great advantage over the others of the possibility of checking the result.

The technic of the test is as follows:

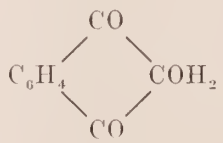
PREPARATION OF THE PLACENTA

The placenta should be fresh, if possible not more than six hours old. It should be washed in running water for fifteen minutes, or until thoroughly free from blood and white. All pieces of the cord and membranes should be removed. It is cut into small pieces or run through the meat grinder. It is washed again, and dried in a desiccator or between filter paper. It is next thrown into two liters of boiling distilled water, to which three or four drops of glacial acetic acid have been added. It is boiled for five to fifteen minutes, and tested at intervals with the biuret or ninhydrin test for peptone. If the test is positive, the placenta must be reboiled.

The essential points in this process are rapid and complete coagulation of the placental albumin, and the removal of all soluble dialyzable material which may react with these reagents. When the placenta is once prepared, it must be dried and placed in a jar heavily charged with chloroform and overlaid with toluol. The jar is stoppered and kept in a cool place. Thus prepared, the placenta keeps indefinitely, but should be tested before being used, and if found to react positively at any time, should be reboiled.

The biuret test consists in adding to 10 c.c. of the fluid to be tested, 5 c.c. of 33 per cent. solution of sodium hydroxid. Mix by careful shaking and add from a buret, drop by drop, a 25 per cent. solution of copper sulphate in such a way that a distinct contact ring is formed. If peptone is present, a violet-red to pure red ring will be seen between the lower colorless and clear segment and the upper cloudy blue solution. This is a positive reaction. A blue ring alone is present with a negative reaction. It is a difficult matter to distinguish between the various shades of color, and had best be left to an expert.

The ninhydrin test is as follows: To 10 c.c. of the dialyzate are added 2 c.c. of ninhydrin. Heat rapidly and keep boiling for one minute. If the reaction is positive, a deep blue color appears. If negative, the solution remains colorless or at most turns light yellow. Ninhydrin appears in colorless crystals readily soluble in water, and is marketed by Hoechst-Farbwerke (Lucius & Bruening Co.) of New York. The trade name is the Japanese word for pregnant. The chemical name is Triketo-hydrinden-hydrate. Its formula is



This reagent reacts with all substances having an amino group in the alpha position to a carboxyl group. It is, therefore, not a specific reagent for

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peptone, as albumin and amino acids will also react. Hence the importance of taking the specimens of blood as far as possible from the periods of digestion, preferably before breakfast. It is important also, to see that the final extractive water, as well as the placenta itself, shows no reaction with this reagent. Absolute surgical cleanliness must be maintained throughout the experiment.

The dialyzing thimbles to be used must also be tested before the experiment, both to see that they will not dialyze albumin and that they will dialyze peptone. The thimbles recommended by Abderhalden are Schleicher & Schull's Hulsen No. 579. For the first test 5 c.c. of egg albumin solution are placed in the thimble and overlaid with toluol. The thimble is washed in running distilled water and placed in a 5 by 1 glass standard to which 20 c.c. of sterile distilled water have been added. This is also overlaid with toluol. The whole is plugged with a cork and incubated for twenty-four hours at 37 C. At the end of that time the dialysate is tested, and if negative, the thimble is again tested. Five c.c. of 1 : 0.001 solution of peptone from silk, Seiden-Peptone LaRoche, are placed in the thimble and overlaid with toluol, prepared in the standard and incubated as before. Those thimbles allowing the osmosis of peptone are then preserved in sterile distilled water overlaid with toluol. About one-half of every box of thimbles are either permeable to albumin, or impermeable to peptone, and are so lost and have to be discarded. The life of a thimble, with fair use and good care, is not over a couple of months.

For the actual test 10 c.c. of blood are withdrawn from the patient by venipuncture into a sterile centrifuge tube. This blood should be placed on ice for half an hour and then should be rapidly centrifugalized until at least 2 c.c. of perfectly clear serum may be procured. Any hemolysis will spoil the specimen.

There is some difference of opinion as to how long the blood will keep. Abderhalden says it must be used fresh. Dr. Ralph Webster of Chicago says he uses it any time within thirty-six hours. Pierce of Philadelphia uses it at the end of a week. In my own cases, I have not been able to make them tally longer than twenty-four hours, a test previously straight negative may become positive and is not reliable.

In the dialyzing thimbles are placed 1 gm. of placental tissue and 2 c.c. of perfectly clear serum, the whole overlaid with ⅛-inch toluol and plugged. The thimble is washed in sterile distilled running water and placed in a standard prepared as before. Incubation must not be less than eighteen hours nor exceed twenty-four hours. With every test, both a positive and negative control should be run in order to avoid error. Too much emphasis cannot be placed on the fact that everything to be used must be sterile in order to avoid contamination.

Douglass of Chicago has not been especially successful in his tests, but thinks this is possibly due to error in technic. Lindning of Munich finds the test positive in pregnancy, but also reacts in advanced tuberculosis and lues in males. Webster of Chicago has not found this to be the case. In fact, so little does he think of it that he uses his Wassermann blood for negative control. Veit of Stuttgart says it is not reliable until considerable placental tissue is present. He thinks it of great value in medicolegal work. Freud and Brahm of Munich, find the dialyzing test more accurate than the optic. Behne of Leipsic claims to have it positive in non-pregnant women with inflammatory conditions of the genital tract. Judd of Baltimore thinks the biuret test accurate and desirable.

The most interesting cases I have to report are those surgical cases where a pregnancy could not be eliminated.

CASE 1.—A young girl, aged 19, who denied the possibility of pregnancy, but who had a tumor exactly resembling a six months' pregnancy. Its uniform rotundity, height in the abdomen, apparent connection with the uterus, its steady growth both before and after exploratory incision, all proclaimed it. The first Abderhalden was contaminated in some way, the color of the boiled dialyzate was bright orange, certainly not a positive color, and yet not a negative. After a period of two weeks, during which the tumor continued to grow, a straight negative result was obtained. An exploratory incision revealed a tabes mesenterica.

CASE 2.—On the other hand, a woman aged 51, who had borne one child twenty years before, presented herself to the City Hospital with an abdominal tumor which had been growing during nine months, with an amenorrhea of nine months' standing, with slightly pigmented, flabby non-developed breasts. No heart sounds could be heard, but the patient claimed to have felt motion for several months, and something resembling motion could be elicited. An Abderhalden test was made with the utmost care. The blood was taken on a fasting stomach. Both positive and negative controls were used, and the test was set up in duplicate. The result was positive. However, after several weeks' observation, the patient was delivered of an ovarian cyst.

CASE 3.—A foreigner, aged 35, was unable to speak English, and no history could be elicited.

The consulting obstetrician was unwilling to say that it was not a pregnancy, so an Abderhalden was made with negative result. Exploratory incision disclosed tuberculosis of the retroperitoneal glands. A small specimen was removed and prepared in the usual way, and set up with serum from Case 1. Cleavage resulted with negative control correct.

Case 4.—Veit claims to be able to distinguish living from dead conceptions. Case 4 was a woman who had had a tumor corresponding to six months. The growth had been regular and symmetrical, and all had been as usual until a short time before being seen, when the patient first noticed that the breasts were decreasing and the abdomen was less protuberant. Following a negative Abderhalden, a three months' conception was withdrawn.

Many reports have been made of finding dialyzable substances in the urine, and it is claimed that pregnancy can be diagnosed in this way. My work in this respect has been absolutely unsuccessful. I have been unable to find urine wholly free from dialyzable substances. A certain pharmaceutical house claims that a negative result is only a difference in shading in blue color, but I should not call a result negative which had a blue color, however faint. The negative color is colorless or a faint yellow, and I have not been able to find urine which did not give a faint blue color.

In conclusion, to recapitulate, the Abderhalden test is very delicate and requires absolute surgical cleanliness and the greatest care in its accomplishment. It is of great value where a clinical diagnosis cannot be made. It is possible to diagnose pregnancy in the obese. It will differentiate the menopause from a pregnancy. It will disclose an abdominal tumor and accurately diagnose ectopic gestation from tumors of the adnexa. A reaction can be had at two months, although results subsequently proven to be accurate have been found as early as three weeks. It will disclose a recent abortion, as the reaction is positive for two weeks following the emptying of the uterus. The test should be of great value to gynecologists and obstetricians.

I have a total of 91 cases to report: 10 lues, 7 tuberculoses, 2 carcinomata, 3 nephritides, 7 menopause, 24 suspected but negative pregnancies, 2 dead conceptions, 1 fibroid tumor, all negative; 21 primiparae, 7 multiparae and 7 recent abortions, positive.

If the test is positive, it does not establish the diagnosis of pregnancy; but if the test is negative, it may be taken as final that there is no living conception present.

HOW TO ADVANCE PHARMACY IN INDIANA*

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LAFAYETTE, IND.

My purpose in appearing before this association is to discuss briefly with you the conditions obtaining in the profession of pharmacy, a profession which is closely allied with yours and in the development of which you must be interested because of its influence on the successful practice of medicine; and further, to solicit your co-operation and aid in advancing this profession to the position it should occupy in assisting the physician in his efforts to better the health of the citizens of our state.

It is needless for me to discuss before a body of physicians the necessity for well-trained and competent pharmacists. Some of you have without doubt come in contact with incompetency and have had your efforts fail because you did not receive the assistance for which you called in your message to the pharmacist.

The standard for entrance to pharmacy in this state is very low, in fact so low that the profession is recruited, in a measure, from a class of individuals that enter it more for the purpose of monetary gain than for the purpose of giving good service to the public. As a result of this low entrance requirement and the desire on the part of *some* druggists to commercialize all branches of pharmacy, drug stores are multiplied almost without number and every city, village and hamlet contains two or three times as many drug stores as are necessary to carry on the legitimate drug business of the community. Competition is so keen that even the competent and conscientious pharmacist is compelled to add side line after side line in order to secure a livelihood, thus dividing his time and interest and causing professional pharmacy to suffer.

The present Indiana pharmacy law permits any person who has had four years' experience in a drug store where prescriptions are compounded to appear before the State Board of Pharmacy and take the examination for full-registration, and, what is worse, a large percentage of such applicants without professional training are successful in becoming registered. It is the boast of a pharmacy quiz course that it can so prepare these men in ten

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weeks that 96 per cent. of them are able to pass the State Board examinations. There is little incentive for a person to secure a good college training when he is placed on a par, in the eyes of the law, with a person who has perhaps sold kodaks and soda water for four years and taken a ten-weeks' quiz-compend cram course in pharmacy.

This low standard permits the admission of incompetent practitioners and causes overcrowding of the profession, overcrowding causes keen competition, keen competition causes low wages and disregard for professional ethics, which in turn demand low standards. Thus we have a complete cycle of cause and effect. It is difficult to break the chain at any point without arousing strong opposition. However, if pharmacy is ever to come into its own, the standard for entrance to it must be raised so high that all incompetency will be weeded out.

There is an effort on the part of the better trained pharmacists of the state to raise the standard of entrance to the profession and thus give to the physicians and public better service. I am sure the physicians of the state are glad to know this and to aid us in securing this rise of standard, because in so doing they not only will be serving the public, but also securing for themselves better assistance in their efforts to allay human suffering.

At the next meeting of the state legislature, the Indiana Pharmaceutical Association will introduce a pre-requisite bill, that is a bill that will require that all applicants for examination must be graduates of reputable colleges of pharmacy. It is needless for me to discuss the merits of such a bill. If it becomes a law, it will raise the standard of the profession, give us better professionally trained pharmacists, and will shut out, in a great measure, the undesirables, those who are now entering it for the purpose of selling booze, etc. This, I am sure, will appeal to you because the advancement of pharmacy needs must have its reflection on your profession.

This pre-requisite law will only be *one* step in advance. Many more will be necessary before pharmacy occupies its proper place. Pharmacy in this country is in a great measure a commercial instead of a professional enterprise, and when we stop to consider that the pharmacists are doing the work that should be done by skilled professional men we must agree that reform is greatly needed. We hope that in a few years the profession may be advanced until all who enter it will be compelled to have a thorough professional training. Then we will have pharmacists that are professional men. With this high training will come professional ethics and a professional spirit which are so much needed to-day. It may be that such advancement will cause a divorce between professional and commercial pharmacy. I am sure that all concerned, the pharmacists themselves, the physicians and the public will welcome this divorce which will give us, as it is doing in Germany, an efficient professional and commercial class of pharmacists.

Medicine in Indiana is on a very high plane and the citizens of the state are justly proud of their skilled physicians. It is indeed a comfort for a citizen to feel that when he consults a physician he is getting the best possible medical advice. I wish that pharmacy were on as high a plane that the public might have the same confidence in its dispensers that it has in its prescribers. Not all communities are as fortunate as we are here in Lafayette in that practically all dispensers are college graduates.

There is, in the minds of some, an idea that pharmacy as a profession does not amount to much and it may be that some of you have become so accustomed to getting along without much assistance from the pharmacists that you do not fully comprehend the benefits to be derived from the assistance of competent and well-trained professional men. If I may be permitted to do so, I wish to give you my ideal of a professional pharmacist and a good pharmacy.

First, the Preparation of the Pharmacist.—He should receive *at least* a good four-years' training in a college that has entrance requirements equivalent to graduation from a commissioned high school. This course should include a thorough training in pharmacy, materia medica, pharmaceutical chemistry, general chemistry, qualitative analysis, quantitative analysis, organic chemistry and biology. It also should include one year of physiology, a year of physiological chemistry, a thorough course in urinary analysis, two years of bacteriology, together with the usual cultural subjects, German, English, mathematics, etc.

A person with such a training not only would be able to do expert compounding, but also would be able to do all of the laboratory work required by the physician in every-day practice, such as complete urinary analysis, incubation and determination of bacteria, determination of bacterial content of secretions, etc.

He also ought to be able to offer to the physician good advice concerning the compounding of medicines and thus protect him from the ravages of the detail man sent out by the proprietary medicine companies.

Second, His Place of Business.—It should consist of the following:

1. A small store in which he handles physicians' and sick-room supplies but no patent medicines, soda water, tin horns, etc.

2. A well-equipped prescription case.

3. A thoroughly equipped biological and chemical laboratory.

All work back of his prescription case and in his laboratory should be done only on the request of the physician; that is, the pharmacist should never perform any professional services for the laity except that requested of him by the physician. In return the physician should *prescribe* but *not dispense,* and he or his patient should compensate the pharmacist for his services at a rate commensurate with the services rendered.

I think that you will agree that at present such a trained person in such a pharmacy would starve to death in nearly every city in the state, because of lack of patronage due to the fact that there are already too many pharmacists compounding prescriptions. However, with the united support of the physicians, I believe that such a pharmacy could make good in every city of 5,000 population or over and would prove a blessing to the community.

This of course is only an ideal. What can we do toward obtaining this ideal? I believe that if the physicians demanded better service from the pharmacists they would find young men preparing themselves to meet the demand.

In conclusion permit me to repeat that there is an effort on the part of the better pharmacists of the state to raise the standard for entrance to the profession. There will surely be opposition from those who wish to commercialize it. We need the assistance of the physicians to overcome this opposition and to aid us in our efforts to raise pharmacy to the position it should occupy, that of a skilled profession administering to your wants and needs and giving good service to the citizens of our state.

DISCUSSION

Dr. Arthur Walters, Lafayette: The many questions involved in or growing out of Professor Jordan's paper could be discussed and argued from daylight until twilight and from then on to dawn and remain unsettled.

Far be it from me, an onlooker as well as a participant in both the professions of medicine and pharmacy, to re-create an argument at this time concerning the relations which exist between you and your pharmaceutical confrères. And yet, after all is said and done, the professional standing of pharmacy depends entirely on the attitude and action of the practicing physician.

What is a pharmacy without a prescription business? It is not a pharmacy, but a department store. And the future standing of pharmacy as a profession depends, as I said before, on whether or not there is need of a prescription counter.

The advancement of pharmacy must therefore take place through an impetus from without as well as one from within the profession. Since the pharmacists are the ones vitally concerned in this matter it is right that they should start things themselves and begin to clean house. They have started. At the next meeting of our legislature a pre-requisite bill will be introduced. This means simply that a candidate for admission to the practice of pharmacy must answer certain requirements as to training and education before he is eligible to appear before the Board of Examiners. This is nothing new to you, for already such a law is in effect governing the entrants to your own profession, and who here will say that the passing of that law was not a long step forward?

What will be the immediate result of a pre-requisite law in pharmacy? It will mean the standardization of pharmacy schools, a thing certainly to be desired. It will mean fewer graduates in pharmacy and graduates of better quality. Analogies are uncertain things, but it seems safe to assume that if the people are to be better served by fewer and better physicians they will also be better served by fewer and better pharmacists. As a result of the standardization of medical schools there are sixty-one less than there were ten years ago, and fewer medical students by over 11,000. So that the cry which may be raised as to the scarcity of drug clerks may well go unheeded. There are too many poor ones now.

Professor Jordan has asked for your aid and influence in having this pre-requisite bill passed. He should not have to ask twice. Indiana will not be the first, for other states are already enforcing similar laws, and it is only a matter of time until practically every state will follow suit.

The passage of this law will not cause an immediate reformation of pharmacy, for laws are evolutionary and not revolutionary. But I know there are physicians who to-day dispense their own medicines through necessity

and not as a matter of choice, who would gladly turn this part of their daily routine to a careful, conscientious and well-trained pharmacist, were he at hand. The passage of this pre-requisite bill is a step in the right direction and is entitled to your support.

DR. ALBERT E. STERNE, Indianapolis: I think it is most unfortunate that this paper was not delivered before a large audience of physicians. It is absolutely essential that something be done in this direction. Every physician of this state ought to know just what this bill is and what it means. I would suggest that in some way the attention of the editor of THE JOURNAL be drawn to this paper, and that a direct appeal be made through our state medical organ to every member of the society to give support to this bill. I shall certainly personally lend every possible assistance in Indianapolis to get this bill passed, and I think every other man of standing in the profession will do likewise.

DR. L. F. SCHMAUSS, Alexandria: I would like to offer a word of caution. While I would have no objection to better pharmacists, on the other hand a good many physicians who now dispense would be glad to prescribe provided they had any assurance that their prescriptions would be properly filled and properly kept—that is the most vital feature—properly kept. There is no satisfaction to a man to study out a certain combination in prescription writing and then have his prescription peddled about and have it refilled. That is the principal reason I do not prescribe. I should very strongly object to this Board of Pharmacists introducing a bill to prevent us from dispensing our own medicines when we wish. I think that should be left to our own discretion.

PROF. C. B. JORDAN (closing): You take a county where local option goes into effect—a man who has been conducting a saloon wants to continue, so he picks up enough to get by the Board of Pharmacy, and continues his business and the poor fellow that is trying to do a straight sort of business gets the blame. That is one of the fellows I am after, and I hope I get him—and get him out of business.

If you notice in my paper I said that we had an ideal pharmacy, and if you men were located in a position where you had an ideal pharmacy, it would be no more than right and fair to ask that you did not dispense, when the pharmacist is working hand in hand with you on a professional basis, each one following good professional ethics. That is all I ask for. But that could not be done in small towns. Of course that is the millennium. This is one step forward, and I am very glad to find so many physicians willing to help us to make this bill a law. I hope the time will come in this state when the pharmacists and physicians will work hand in hand for the betterment of the health of the citizens.

THE December issue of the *Journal of the Michigan State Medical Society* calls attention editorially to the danger of using poisonous fly destroyers. From July 1 to Oct. 15, 1914, forty-five cases of poisoning of young children were reported in the press of a few states and it is pointed out that the symptoms of arsenical poisoning and cholera infantum being very similar there are possibly many more cases of the kind. It might be well in view of this danger for physicians to eliminate the possibility of arsenical poisoning before diagnosing a case as cholera infantum. A few years ago there was considerable agitation against the use of phosphorus matches, partly because of some children being poisoned by eating or sucking the heads of the matches. There are doubtless many more cases of poisoning from the poisonous fly destroyers. Phosphorus matches have been abolished, so should be poisonous fly destroyers.

It seems this danger already has been recognized by the authorities in far-away South Africa and the sale has been forbidden, except by licensed chemists, of certain arsenical fly destroyers, more particularly the tin boxes which have a wick or wicks through which the poisoned water is drawn. The fact that sugar is added to draw the flies makes these boxes especially dangerous to young children; furthermore all these poisonous fly destroyers are usually placed on the window sill and children as well as flies are attracted to the windows and the poisons are thus within their reach.

Both the blotting paper impregnated with arsenic, (which is put in an open saucer with water and sugar) and the tin boxes with wicks to draw the poisoned water to the surface are extensively used, and there is probably no poison so commonly and unnecessarily used where it is perforce within the reach of young children as these various arsenical fly destroyers. In country homes, where it often takes some hours to get a physician, and even in our cities among the foreign born, where the parents are, as is well known, slow to call the services of a physician for childish ailments, the danger is especially great. There are as effective and more sanitary ways of killing flies. *Poisonous fly destroyers are an unnecessary evil and should be relegated to the past like the phosphorus match.*

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EDITORIALS

FEE-SPLITTING; THE DUES OF THE GENERAL PHYSICIAN

In this number of The Journal we publish in the Correspondence Department a communication concerning fee-splitting which deserves the serious consideration of all members of the medical profession.

That fee-splitting, under whatever guise, is ethically wrong and pernicious in influence is acknowledged by every right-thinking physician, but the fact remains, as pointed out in the communication, that fee-splitting among a large percentage of general physicians is due to the manifestly unjust conditions that exist, due to the independent and even selfish attitude of the average surgeon. As an example of how many of the general physicians feel we quote a statement which we recently heard given by a general physician whom we believe to be of unquestioned integrity and professional standing. The statement was as follows:

"For years I took my surgical cases to a surgeon of ability and never asked a favor from him. I overlooked the fact that the surgeon often took from my patient a fee that absolutely prohibited me from getting anything for my services, or, if receiving anything, being obliged to wait a long time before getting it. I also overlooked the fact that when the patient got into the hands of the surgeon I was lost sight of entirely — ignored, if you please — and not even shown ordinary professional courtesy at the hands of the surgeon. All this I tolerated because I felt that I was serving the patient and I knew that the patient's interests, so far as his surgical condition was concerned, were being cared for in a highly satisfactory manner. But I finally came to the conclusion that all GOOD surgeons were not so much inclined to 'hog it all' as the one to whom I had been referring my surgical cases. In a spirit of revolt I finally took a patient to another surgeon of excellent repute and with a reputation for fair dealing. Much to my surprise he discussed with me all the various phases of the case and treated me as a consultant. He outlined what he proposed to do and insisted that I should remain for the operation, which was fixed for a time when I could be present. I was invited to stand at the surgeon's side and watch the operation, and was accorded every courtesy that could be extended to a consultant. At the completion of the operation the husband of my patient asked the surgeon for his bill. The surgeon replied, 'Arrange for the payment of your family physician and then come and see me about the payment of my fee.' Following the operation I was kept posted as to the progress of the case, and when the patient returned home I was given some suggestions as to further care. Since that time I have referred to the same surgeon numerous cases, and whether I went with the patient or not, I have had always what I call a 'square deal.' Now I don't want any surgeon to pay me a commission, and he would insult me if he offered a commission. Neither do I want him to collect my fee for me under any guise. I want to reserve the right to charge what I think my services are worth, but I don't want the surgeon to ignore me altogether the minute he gets his clutches on my patient, thus belittling me, to say nothing of putting me in a position whereby, in many cases where the patient is of moderate means, I stand no chance whatever of getting any compensation. The surgeon does not have to entertain me at his home or the club in order to prove that he is a good fellow. Neither does he have to ask me to clean up for the operation and then put a retractor in my hand to hold and falsely represent it as assistance for which he is willing to pay. I realize that the surgeon's trained assistants are the ones to render assistance if the surgeon is to do his best work and the patient's interests are to be safeguarded. But what I want to be shown is ordinary decency and professional courtesy. As to the matter of the fee, I will take care of that, but I want the surgeon to recognize the fact that if he is entitled to a fee, so am I, and he should consider the conditions in a manner that will make it possible for me to receive adequate compensation and still maintain my self respect."

We are quite in sympathy with the man who wants to do the right thing but is prevented from doing so in consequence of conditions which it is difficult or impossible for him to control. Not all surgeons are arrogant, opinionated and selfish, but if one-half of the tales that are told are true, then there are altogether too many

men of ability who are oftener deserving of the cold shoulder from the general physician. It is this independent and selfish spirit on the part of many surgeons that has finally resulted in the practice of commercial methods by the general physician who in a spirit of revolt has turned to the surgeon — often an incompetent and illy-trained man, but a "good fellow"—who is not adverse to buying patients if he can get them in that manner. We are unalterably opposed to fee-division under any guise and for the reason that it is demoralizing to our profession and in the end injurious to the public. The iniquity of the whole thing is recognized by the fee-splitting surgeons themselves, but they apparently have not the courage of their convictions and prefer to let the ultimate outcome be what it may. But that the conduct of all non-fee-splitting surgeons is irreproachable is not true, and if ever we finally and effectually settle the fee-splitting question there must be a revival of the spirit of fair play as exemplified in a recognition of the rights of others and especially the professional courtesy and mutual helpfulness which should be shown one physician by another. The conscientious general physician does not ask, nor does he desire that his fee shall be either charged or collected by the surgeon, but he does ask for the privilege of not only charging but collecting his fee without being handicapped by the greed of the surgeon who often pays no attention to anything but his own selfish interests. Furthermore, the general physician wants and deserves a little more of that spirit of professional courtesy and mutual helpfulness which is his due, and which if exerted will go a long way toward righting some of the commercial tendencies about which we now complain, as it will also improve those fraternal relations which in the end are our bulwark of safety and progress.

POST-GRADUATE STUDY IN AMERICA

Now that the European clinics have been closed to American physicians in consequence of the war, it remains for the medical centers of the United States to supply the facilities for post-graduate study here at home. That we have as capable and conscientious teachers in America as can be found elsewhere no one doubts, but the trouble has been that we have put forth no organized or systematized effort to utilize our teaching and clinical facilities in furnishing adequate post-graduate instruction for that large number of physicians who desire to keep fully abreast of the times in modern medicine. There is every reason why there should be a reorganization of post-graduate education in America with a view to bringing about a uniform and much extended system, so that the conscientious graduate student of medicine will not feel that it is necessary for him to go to foreign lands for the latest and best instruction and corresponding clinical advantages. We hope that the leading medical institutions in the more populous centers where clinical advantages are to be had will see the necessity as well as the propriety of taking hold of this question in a serious way, and that their efforts will have the sanction and assistance of the educational committee of the American Medical Association.

To our notion the craze for European post-graduate work has been unjustified except as a means for the overambitious medical man of taking an agreeable vacation and at the same time securing a little self-advertisement. That some of the European clinics, notably those of Vienna, have offered unusual advantages cannot be questioned, but the trouble has been that many of the European clinics have been organized and conducted with a view to supplying the American demand for a "rapid fire" variety of instruction which thousands of American physicians take advantage of to their discredit.

Anent this subject, Dr. H. P. Greeley of Boston has such a pertinent communication in a recent number of *The Journal A. M. A.* that we feel disposed to reproduce it. In his correspondence, which is entitled "Post-Graduate Study; Foreign Realities versus American Remedies," he says:

"We all know the enthusiasm with which American physicians have sought the European clinics of Berlin and Vienna for postgraduate medical work. Hundreds of physicians each year flock thither. They stay varying lengths of time, but generally are content with a few weeks or two or three months at most. To the average layman such study in Europe casts a halo of superiority about the physician possessing it. It is a matter of common parlance to say, 'Dr. So and So, yes, he has studied abroad, in Vienna.' Most physicians in this country who are doing serious work and who are unable to go abroad for study look on Berlin or Vienna as their Carcassonne. If they never attain it, it remains a source of lasting regret or constant longing. Physicians will often make great sacrifices in order to visit the foreign clinics. Many of them are uncritical and easily persuaded of the tremendous advantage of the work. Some are frankly doing it just for a good time and for the advertisement which they know such a vacation will bring them on their return. But I am convinced that there is an ever-increasing number of physicians who go with all enthusiasm and expectation and who come back dis-

appointed and disillusioned about foreign study. This in no way is a reflection on the medical profession in Germany, for they are only supplying the demand of the American physician and giving him what he wants. Neither does this statement apply to those who spend a year or more in serious work in a foreign clinic. But they are relatively few. They generally remain at one clinic and do not put in an appearance at the large centers.

"The Germans are just beginning to appreciate American medicine and to read American literature. Why they have been so slow in recognizing the high standard of our work may be partly constitutional, but is, I think, much more directly due to the impression which American physicians studying abroad make. They are undoubtedly not representative of the best in the profession in America. The Anglo-American organization in Berlin and the American Medical Association of Vienna are partly responsible in that they encourage the 'quick-lunch' variety of study and have so organized special monthly courses for foreigners that it is almost impossible to make the Germans believe that we are not all quasi-quacks. The physician receives his medical pabulum as rapidly and in as large doses as he can pay for it. Go to any lunch counter at home and you may see a similar sight. All the crudities and mannerisms for which we are caricatured are in evidence, from the method of handling table utensils to the manner of stoking food and the peculiarities of our national tastes. Go to Vienna and you can see the same phenomena at the medical lunch counter. Some are there for one month and they gorge themselves, eating much and digesting little. Others are there for the side shows and the beer, and take only food enough to get their certificate, which the University of Vienna issues to any one who can pay the price of a course whether he attends or not. Generally courses are served up in German and so rapidly served that the average American loses the meat and gets only the names. Sometimes the attempt is made to furnish English dishes, and then the job is generally botched. The German language alone is an all-sufficient argument against postgraduate study for the average American physician. All the teaching is didactic, and this again condemns it from the point of view of serious work in modern medicine. The laboratory is after all the only safe one. In Vienna you find men taking the most indigestible mixtures. Surgeons 'brushing up' in neurology, gynecologists taking a little dab from the 'Freudian School,' many men listening to the refinement of differential diagnosis, who know almost nothing of the fundamentals. Most of the patrons of this great medical lunch counter get wildly enthusiastic, but they understand little of what they are eating and you are reasonably certain that they will have mental indigestion of the worst kind if they do not actually become seasick on their return and lose it all. What few misgivings they may have are obliterated by the general air of enthusiasm and the thought that nobody at home is any the wiser.

"Without the slightest danger of being called snobbish, the average American physicians in Vienna most of us wish to avoid. Their absence is more flattering to our pride than their presence. Many of them are avowedly on a vacation. Others frankly say that their community only needs to be told that a man studied in Berlin to increase its respect for him. One man told me that he must visit Berlin before he returned, as it was regarded as the center in his community. I suggested in joke that it might be enough to ride through, and he acquiesced in all seriousness, and I afterward learned that he spent one afternoon in Berlin on his way home. Such instances are not uncommon. A larger number, however, are perfectly sincere, but do not recognize how little they are really getting for their money and how infinitesimal is the knowledge which they carry home with them. These physicians go because it is the thing to do, and they stay when they get there because they are uncritical and do not realize the absurdity of it all.

"Physicians at large do not as yet appreciate the laboratory method in medical education and still cling to didactic teaching. It is a much easier thing to eat a meal set before you than to prepare the meal for your own delectation. But you cannot learn cooking from eating; neither can you learn medicine from hearing it taught.

"A further reason for the continued popularity of foreign study is the fact that the general public is also in ignorance of its real value. It is our duty to set the facts before the public and enlighten them so that the name of 'specialist' appended to one who has lived in Vienna for a few weeks will not be the open sesame to a lucrative practice.

"Our other clear task lies before us: the efficient organization of postgraduate study here at home. We have all the facilities but lack organization. Now that the foreign market is closed, this is not only a duty but an imperative necessity, and will be an opportunity for advancement and growth in this country to which the opprobrium of self-interest cannot be attached. Whatever outside commercial advantages may come to us through the war, they are far less important than the development of our own resources through cooperation and organization within our own borders.

"The impetus given to postgraduate education in this country by the European war will be tremendous. Foreign centers of education will inevitably lose prestige. The tide will turn so that we may be the recipients of the European student as we are now of the European laborer.

"Let us at once set to work and organize ourselves for this task and give to American physicians practical postgraduate work in our own language and with our own trademark."

WHAT PHYSICIANS MUST DO TO COMPLY WITH THE "HARRISON BILL"

Register with the Collector of Internal Revenue on or before March 1, 1915.

Take inventory of all goods on hand coming under this Act.

When writing prescriptions, give name and address of patient, your name in full, your address and register number.

When dispensing, keep a record of quantity and kind of drug dispensed, name and address of patient and the date on which dispensed.

When administering, no record need be kept.

When purchasing, fill out order blank issued by the Internal Revenue Department, retain

duplicate of order for two years from date of issue.

Dispensing physician must register in a dual capacity, as physician and dealer.

No prescriptions containing such drugs can be refilled; a new prescription must be written.

The drugs embraced in the Harrison Act are: Opium and coca leaves, their compounds, derivatives, salts and preparations, excepting "preparations and remedies containing not more than 2 grains of opium, or more than 1/8 grain of heroin, or more than 1/4 grain of morphin, or more than 1 grain of codein, or any salt or derivative of any of them in one fluidounce, or, if a solid or semisolid preparation, in one avordupois ounce; or to liniments, ointments, or other preparations which are prepared for external use only, except liniments, ointments and other preparations which contain cocain or any of its salts or alpha or beta eucain or any of their salts or any synthetic substitute for them.

FEE BILLS

We notice that some of the county medical societies recently have adopted fee bills. We are quite in sympathy with the attempt to establish uniform and proper fees for professional service, though we are inclined to believe that every physician will charge what his services are worth whether he has subscribed to a fee bill or not. Some doctors especially delight in charging just a little less than their confrères, under the mistaken notion that they are currying favor with patients and incidentally increasing business through spread of the knowledge that it is more economical to employ them in preference to other physicians who charge more. We believe that the public suffers from these "cut rate" doctors, for a man who has so little self-respect and such a poor appreciation of the value of his own services generally is not worthy of the trust of any considerable portion of the public. But fee bills, like gentlemen's agreements in business, are made to be broken, and accordingly we have little faith in them. However, in passing, we may remind our readers that the principal objection to the average fee bill is that the so-called minimum charge is always too low, though it generally represents the customary charge in the vicinity for the services rendered. Those who frame the fee bills usually offer the argument that the minimum fee is supposed to be for patients in moderate or poor circumstances; but why not make the minimum fee the established fee and have it understood that the acceptance of anything less will be considered as donating a portion of the fee to charity? We also may remind our readers that not one medical fee bill in one hundred shows any difference in fees over the fee bill that existed thirty or even forty years ago when the costs of living and the costs of procuring a medical education were one half what they are now. It positively is ridiculous to think that doctors will give office advice, including medicine, for fifty cents, and yet that is the statement that appears on numerous fee bills which we have examined. Some medicine may be dispensed for fifty cents, but no advice that is worthy of the name of advice, no matter how simple it may be, should be included in such a charge unless we wish to cheapen our professional knowledge to a point where it ceases to have any value. The lawyer, the tradesman, the mechanic, and in fact those following every other vocation in life are receiving greater compensation than ever before, and the times justify it; but the average doctor pegs away for the same — often less fees than were in force a half century ago, and he underbids his confrères, or adheres to minimum fee bills that are ridiculous as to the amount that shall be charged for most professional services. He not only is content to do this, but he fights to pull everyone else down to his level by volunteering the information to the public that any one who charges any more than he does is robbing the patient. Certainly doctors are funny birds!

STERILIZATION AS PRACTICED BY DENTISTS

A traveling representative who calls on physicians, dentists, and veterinary surgeons makes the charge that on the whole dentists are very careless or indifferent in the matter of sterilization of instruments that are used in the mouths of patients. He even states that his observation confirms him in the belief that many dentists do not practice even ordinary cleanliness in the care of dental instruments, and as proof of this assertion he asks his friends to watch the ordinary dentist dip a mouth mirror in a bowl of water and wipe it off, then use the same mirror and the same washing fluid for the next patient. While we are disposed to question the general charge of uncleanliness on the part of dentists, yet we do believe that the average dentist is not as careful as he should be concerning the matter of

sterilization, and we make this statement in view of personal observation and like criticisms made by the better class of dentists who recognize the shortcomings of their professional brethren. The ease and certainty with which many forms of infection — and particularly syphilitic infection—may be transmitted from one patient to another through the medium of mirrors and dental instruments makes it incumbent upon every dentist to practice the most thorough disinfection in order to prevent the dissemination of disease, as also carry out good cleanliness. To our notion the careful dentist, like the careful nose and throat surgeon, not only sterilizes all instruments each time after being used upon a patient, but reassures the patient as to cleanliness by the additional procedure of dipping everything in water that is boiling on a small electric or gas stove before the eyes of the patient. We know of some people who avoid, except under dire necessity, consulting either dentists or nose and throat specialists because of the wholesome fear that instruments that are used many times a day in the mouths of a number of patients may not be sterile, and in view of conditions as they are actually known to exist, we believe that it is time for some members of both the dental and medical profession to adopt measures which will allay the just or unjust suspicions of the laity.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

The Metropolitan Life Insurance Company is extending free nursing service to its industrial policy holders. The next thing we hear of will be that the insurance companies are furnishing medical and surgical service gratuitously to policy holders.

And now comes *The Journal A. M. A.* with the query, "Are there expectorant drugs?" The suggestion is made that in view of so much negative evidence it may be worth while again to investigate the evidence on which is based the custom of giving this class of drugs.

Whenever a patient comes to you with a statement to the effect that he has paid numerous doctors enormous fees for services rendered you are quite safe in assuming that the patient has paid his doctors little or nothing, and never was charged adequately for the services.

Talk about being up to date, the Hoosier state is not behind in the race. The Indiana University is the first school to establish a moving picture show on the campus. We suppose that the shows are censored, and that the nickels go to the university fund.

Clark, Howard and Jennings counties have the distinction of maintaining medical societies that embrace in their memberships all of the eligible doctors in those counties. This shows an ideal professional spirit in those counties, and the example can be followed to advantage by many other counties in the state.

Now comes A. C. Abbott of the University of Pennsylvania, with the statement that the term "air-borne diseases" is a figure of speech because the air does not carry disease. He says that no amount of ventilation that will yet leave a room habitable will drive bacteria from the atmosphere. We are under the impression that this statement is open to argument.

Brains are wanted by the American Association for the Advancement of Science! This statement could be construed in various ways, but is intended to convey the idea that efforts are being made to induce eminent scientists, captains of industry and political leaders to permit their brains to be examined after death. Noted doctors are asked to comply with the request.

The *New York Tribune* is another convert to the idea that good journalism demands clean and honest advertising. It will refuse to accept quack or fraudulent patent medicine advertising. It will go still further and guarantee its readers against loss or dissatisfaction arising through patronage of its advertisers. It is hoped that the example will have a wholesome effect among other publishers.

Concerning the present European conflict the American people are very properly and very naturally remaining neutral, and yet inwardly we cannot help taking one side or the other. Most of us would be more neutral in our feelings if it were not for the inexcusable tragedy

in Belgium. There certainly should be a day of reckoning for the devastation and suffering brought upon a wholly innocent people by war crazed nations.

Some doctors seem pleased when a patient volunteers the information that he has consulted many doctors without securing relief, and believes that he finally has come to a doctor that can cure him. Be assured that soon you will be one of the doctors that the patient "has consulted." You will be a wizard if you hold the patient that takes delight in roaming from one doctor to another with a complaint as to how little has been accomplished.

Not counting the more populous counties of Marion and Vanderberg, from which we have received no reports, there are about 650 doctors in Indiana not now members of any medical society who are eligible and should be induced to become affiliated with our state association through county medical society membership. There is room for a little missionary work. The secretaries of county medical societies can secure many applications if they will go after them. Who will be first to make a showing?

Red Cross stamps sold freely during the holidays. The objects of the enterprise are worthy of support, but we believe that the untiring efforts of so many enthusiastic workers do not result in an adequate return of benefits for the localities where the sales are greatest. In this connection we desire to ask our Red Cross friends in Indiana just what percentage of the money collected in Indiana in connection with the sale of Red Cross stamps will be returned to Indiana in helping us to fight tuberculosis in this state.

On February 1 approximately 500 members of the Association were lapsed from membership, as their dues had not been sent in by the county secretaries. Every member whose dues have lapsed was sent an official notice to that effect from the state secretary, urging him to be reinstated by paying his dues. The county secretary will please take notice of this fact in case that such members complain that they did not know they had not paid their dues. It will be well to investigate your receipt books to be sure that all dues paid have been promptly forwarded.

> Lulu Johnston, Chiropractor, 407 Bass Block, Fort Wayne, Ind. Examination and consultation free.

Such is the reading on the face of a blotter that is distributed to Fort Wayne business houses and residences, not excluding the homes and offices of doctors, and yet the chiropractors speak of "practicing a profession." To our notion it comes nearer being a "trade," though we believe that tradesmen would object to recognizing any business that stands upon such a frail foundation.

Have you seen the last number of Murphy's Clinics? If you have not, borrow a copy from some friend who is subscribing for the Clinics and examine the first ten or twelve pages which have splendid pictures of Murphy and his business associates, and views of their artistically furnished, splendidly arranged and adequately equipped private offices. An advertising stunt like that is worthy of the master, and J. B. certainly does know how to keep in the limelight, even if his methods are questioned by men having different ideas of good taste and propriety.

In taking new members into our county medical societies it is well to remember that it is easier to get men in than it is to get them out, and there are not a few members of county medical societies that are no credit to the organizations that made strenuous efforts to secure them. The class of doctors who never attend a medical society except to get a square meal at the society's expense, or to vote for some undeserving member for an office, are better out than in a medical society. Few as there may be of worthless doctors in our medical societies, yet there are altogether too many of them for the best interests of our societies and we make a mistake by increasing the number.

Indiana is threatened with a Eugenic Law which provides that a man who contemplates marriage shall present a clean bill of health, and exempts the woman. This may be all right, and we are willing to admit that men are more likely to be unable to present a clean bill of health, so far as social diseases are concerned, but is it quite fair to exclude women? Furthermore, the Eugenic Law which does not provide for a very careful and thorough examination by competent medical men is bound to be more or less of a failure. Up to the present writing we

learn that the bill, which is before our Indiana legislature, makes it exceedingly easy for anyone to secure a clean bill of health in a most perfunctory manner.

The value of moving pictures as an educational feature has been tested in a variety of ways, and now the experiment is to be made of depicting by moving picture films the baneful effects of drug and alcoholic addiction. One of the best film producers is to put out several films showing the evil effects of alcoholic beverages and such narcotics as cocain and opium derivatives, and the films are to have the approval of various philanthropic organizations that are interested in the suppression of crime. We note that some of the public schools are advertising moving pictures as a part of their teaching equipment, and it is expected that some of these films pertaining to the evil results of drug and alcohol addictions will be used in the public schools.

William A. Hall, a Detroit pharmacist, offers a new antidote for corrosive sublimate poisoning. In an article which appeared in the *American Pharmaceutical Association Journal* we note his recommendations, which are as follows: "Remove the stomach contents as thoroughly as possible, give plenty of white of eggs and remove in the best way, then for every two grains of mercuric chlorid supposed to have been taken, administer the following:

Potassium iodide	7.35	gr.
Quinin hydrochlorate	4.0	gr.
Dissolve in water	4.0	oz.

It forms a precipitate with the mercuric chlorid, insoluble in dilute acids or alkali carbonates. A solution could be kept on hand ready for use with the addition of hydrochlorid to make it 2/10 of 1 per cent.

The Harrison Anti-Narcotic Bill for the suppression of illicit trade in habit-forming drugs has passed congress and is now a law. The bill as finally passed exempts the dispensing or distribution by physicians of drugs containing opium or coca leaves or any of their derivatives, provided the physician keeps a record of all such drugs dispensed or distributed, showing the amount dispensed, the date, the name, and the address of the patient. If, however, the physician is in personal attendance of the patient, such a record is unnecessary. Physicians and all others buying drug preparations containing opium or cocain must order them on forms to be issued by the Commission of Internal Revenue, but physicians' prescriptions are specifically exempt.

As a reminder concerning the criticism that has been made in The Journal that oftentimes we put forth too strenuous efforts to secure undesirable members in our medical societies, permit us to say that investigation shows that a very large proportion of the malpractice suits in Indiana that have been defended at the expense of our Association have been brought against doctors who are members in name only of our county medical societies. The man who really needs the medical society is the one who generally stays away from it, and yet he is the one that eventually proves a burden to the society through reprehensible conduct of one kind or another. Our medical defense is a splendid thing, and it is worth all that it costs, but up to the present time it has been of benefit mostly to inactive members.

The Louisville medical profession is in the throes of a factional fight over the city hospital question. It is charged that the hospital is run in the interest of the medical college, and that those who are not connected with the medical college are barred from attending the hospital. What is occurring in Louisville is bound to occur in any city where the public hospital prevents other than the hospital staff from service in the hospital. In private or sectarian hospitals the matter assumes a different phase, but in a hospital that is kept up by general taxation there can be but one rule, and that is fairness to one and all. Any institution, whether public or private, is better off if it has a well-organized staff, but an institution kept up by public taxation should not bar reputable physicians from the hospital because they do not happen to belong to the staff.

We desire to emphasize the statement made by Dr. Emerson in connection with his discussion of the function of the University Medical School when he says:

> Universities now are beginning to appreciate that they have a very definite responsibility toward the public for their graduates and that this responsibility concerns the morals of the young doctor as well as his professional training. The university owes it to the state that no man of loose or questionable moral character receives a medical diploma and that the recent graduate be a safe general practitioner. This

responsibility is especially heavy during this young graduate's first four or five years in practice. After that time the responsibility of his education will in a large measure rest in his own hands. He can educate himself further or can take postgraduate courses. The young doctor just graduated, or after one year of hospital service, is not expected to perform a major operation or start independently in any specialty. He is expected to be safe in general practice, to care well for the ordinary diseases, to perform well minor operations, and to attend skilfully cases of normal labor. Furthermore, he is expected to know the limitations of his ability, and when to call for more expert assistance.

Some of the prominent Christian Science healers are making a lot of money in their efforts to relieve suffering mankind. The charges of the ordinary doctor look like charity charges as compared to the bills rendered by Christian Science healers, for those smooth individuals do not hesitate to tack on a good fee for everything they do, and no one ever heard of their doing anything for charity. It is a strange thing that a sect which professes to be Christian in its conduct should devote no time or attention to charity of any kind whatsoever. The sick poor can be sick and die for all that the Christian Scientists care. Another thing which strikes us as being peculiar is that though the Christian Scientists say that they are doing their healing in Christ's name they are not following in His footsteps, for Christ never charged for healing the sick, and He sought the poor and lowly, which evidently is contrary to the finer feelings of the aesthetic Christian Scientists of this year of Our Lord, 1915.

One of the Indiana health officers very justly complains because some reputable members of the medical profession, in an endeavor to curry favor with certain of their patrons, refrain from reporting contagious diseases, and whenever discovered in the act of shielding families from the inconvenience and unpleasantness of quarantine regulations, disagree as to the diagnosis. In times past it was not an uncommon thing for health officers to meet with such experiences, but in this day and age we ought to expect more of not only doctors but the public as well, for whoever attempts to cover up or shield infectious diseases is courting trouble for himself and others. During the winter months there are many localities in the state where scarlet fever, diphtheria, and occasionally small-pox exists, and proper care on the part of physicians in taking due precautions in all suspected cases will go a long way toward preventing spread of the infection. No doctor should assist in covering up any case of communicable disease.

The rivalry between publishers of popular magazines seems to have reached that point where all the editorial ethics, including a sense of honesty and truthfulness, are thrown to the winds. *McClure's* magazine started the ball rolling by publishing a lot of senseless twaddle concerning scopolamin-morphin analgesia in obstetrical practice under the catchy title of "Twilight Sleep." Not to be outdone, the *Cosmopolitan* magazine comes forward with an article on a new method of eliminating the pains of labor through the administration of detoxicated morphin. Aside from the fact that the *Cosmopolitan* magazine is exploiting a preparation that is nothing more or less than morphin and as dangerous as morphin, they have falsely credited the French Academy of Medicine with having endorsed the treatment. It may pay the popular magazines to publish these senseless and untruthful articles of a pseudo-medical character, but we believe that the ethics of journalism should prompt editors to select articles for publication with due regard to facts.

The whiskey interests are making a vigorous effort to bolster up a lost cause. With statewide prohibition on the gain, the brewers and distillers see the handwriting on the wall and are trying to stem the tide by attempts to educate the public to their way of thinking. Once independent and haughty, they are now penitent and begging. We are flooded with pro-liquor literature and requests to publish articles opposed to temperance. The latest is a pamphlet which sets forth in glowing terms the value of alcohol on the battlefields of Europe, and containing a veiled plea for more extended use of alcoholic beverages as medicinal agents. The medical profession as a whole has not taken any very decided stand on the subject of temperance, but we believe that we voice the sentiments of nine-tenths of the medical men of this country when we say that the world would be better if alcoholic beverages of every description could be banished forever. It is a debatable point whether alcohol has a place in medicine which cannot be filled by something else, but at all events the use of alcohol as a beverage should be prohibited by national prohibition if it is possible to secure such a condition through federal legislation.

A charge that may be made against the average physician is that he does not know what he prescribes for his patients and does not take the time and trouble to obtain knowledge which may be his at slight effort. He listens to and believes the fanciful and exaggerated stories of the detail man, and then proceeds to put into effect the species of therapeutics that have been provided for him by the manufacturing pharmacist. Not only this, but he fails to analyze the results secured, and often is a very willing tool of the manufacturing pharmacist through testimonials which he is not adverse to giving on little or no basis. The Council on Pharmacy and Chemistry of the A. M. A. has been working for years to place in the hands of the medical profession information that is of inestimable value to doctors and is so trustworthy that the prescribing physician cannot go astray if he follows the findings of the Council, but alas, so many doctors overlook the findings of the Council and even do not take the trouble of getting acquainted with the wonderful work that is being done in their behalf which only goes to prove what we have often thought and said, that doctors do more harm to themselves than is done to them by anyone else.

Practically all of the preparations that are supposed to promote digestion are worthless, and we are pleased to note that the U. S. Bureau of Chemistry has seen fit to issue a public circular on this subject. The board states that examination of a number of products which purport to contain certain enzymes or ferments supposed to be useful in promoting digestion shows that they contain little if any of the active digestive agents. Further investigation shows that manufacturing firms have employed a sufficient quantity of pepsin, diastase, pancreatin, trypsin or similar material, but in many cases no attempt has been made to determine whether the material used is really active. In certain cases manufacturers have combined pepsin and trypsin, which tend to negative each other, and in other cases they have used pepsin in alkaline media which destroy activity, and have combined trypsin with acid substances which are not suited to it. Under certain methods of preparing the remedies, heat is applied to a degree that may destroy activity of the pepsin or other enzymes. Similarly, many of these substances which owe their properties to the actions of enzymes are put up in too strong alcoholic solutions or in other ways which lessen their effectiveness. Many of the preparations do not keep well, and while possibly active at first after a time lose their digestive activity. When the Council on Pharmacy and Chemistry of the A. M. A. issued a similar report it was discountenanced by many manufacturers, and not a few members of the medical profession were led astray by the specious arguments of the manufacturers. It is to be hoped that the report from the U. S. Bureau of Chemistry will effectually settle this question of the value of so many of the digestive agents that are now upon the market.

"Yes, Geraldine, we saw the *Delineator*, *McClure's*, the *Cosmopolitan*, the *Pictorial Review*, the *Billboard* and the Peruna Almanac. But have you—oh, have you seen the last illustrated edition of Dr. John B. Murphy?

"It was Dr. John B. Murphy who said—in an address before the American College of Surgeons, an institution in which he is a large part of what and which is going to banish all appearances of evil and maybe some of the evil itself—that 'No return should be expected without an adequate investment, except counterfeit.' Well, all we have to say is: just you look at the two faces of the gentleman himself in one picture of the last illustrated and illuminated edition of Dr. John B. Murphy, and at the pictures of rest-rooms and things belonging to Dr. John B. Murphy, and see if you don't think he is qualified to talk about investments, expected returns and counterfeit.

"It was the same Dr. John B. Murphy who said in that same address to that same college: 'A leaven is already being disseminated which is elevating the moral tone of the profession.' Soon after this memorable deliverance the last edition (illuminated) of Dr. John B. Murphy made its appearance. We don't know what it did to the 'moral tone,' but, believe us, the halftone certainly got a boost.

"The publishers persuaded him to do it, so we read. But don't you know the photographer had an awful time getting his unwilling concent to pose before that beautiful big mirror? Who put that big mirror right in front of Dr. John B. Murphy's desk, anyway?

"And, boys! Our new offices are right at the door of the hospital where we operate. Ain't that sweet?

"O tempora! O mores! O FACS! O——." —*Journal of the Tennessee State Medical Association.*

[And yet we talk about quacks!—Ed.]

To the Members of The Indiana State Medical Association.—Since Jan. 1, 1915, I have been proffered the dues of several members for the year 1914. In declining to accept these dues I wish to make the following statement: Several years ago the fiscal year used to be from one annual session to the other, but this time was very indefinite and now the fiscal year has been changed to correspond with the calendar year. This was done so that reports would not overlap and could be made with absolute definiteness. After the secretary and treasurer make their final reports for the fiscal year ending December 31, I do not see how new entries can be made, and acting on the authority of the By-Laws, Chapter IX, Section 13, "The fiscal year of the Association shall be from January 1 to December 31, and all assessments shall be for the fiscal year and payable in advance," I take it that dues received after the end of the year are not paid "in advance" and, therefore, are not receivable. If I pursued any other policy: First, how could I enter this money in my books and account for it to the State Association; second, how could the member receive any equivalent in benefits? Quoting from the same section, "The assessment shall entitle the members to all the benefits from the time of paying the assessment to the close of the fiscal year only." Third, how could I ever make a statement that such a member was in good standing for 1914? As I stated, this rule has been operative for only a short time, and there has been no public complaint made by any member. If there should be any complaint this year, the aggrieved member should present his objections to the next meeting of the House of Delegates.

Chas. N. Combs, Sec.

The U. S. Bureau of Chemistry, in answering inquiries as to proper labeling for medicinal preparations to comply with the Food and Drugs Act, makes the following statement:

(1) *Claims of Therapeutic Effect.*—A preparation cannot be designated as a specific, cure, remedy, or recommended as being infallible, sure, certain, reliable or invaluable, or bear other promises of benefit unless the product can, as a matter of fact, be depended on to produce the results claimed for it.

(2) *Statements of Misleading Character.*—Not only are direct statements and representations of a misleading character objectionable, but any suggestion, hint, or insinuation, direct or indirect, or design or device that tends to convey a misleading impression, should be avoided. This applies, for example, to such statements as "has been widely recommended for ——" followed by unwarranted therapeutic claims.

(3) *Indefinite and Sweeping Terms.*—Representations that are unwarranted because of the indefinite and sweeping character should be avoided.

(4) *Testimonials.*—Testimonials, aside from the personal aspect given them by letter form, hold out general representation to the public for which the party doing the labeling is held to be responsible. No statement relative to the therapeutic effects of medicinal products should be made in the form of a testimonial which would be regarded as unwarranted if made as a direct statement of the manufacturer.

(5) *Refund Guarantee.*—Statements on the labels of drugs guaranteeing them to cure certain diseases or money refunded may be so worded as to be false and fraudulent and to constitute misbranding. Misrepresentations of this kind are not justified by the fact that the purchase price of the article is not actually refunded as promised.

Inasmuch as many newspapers published in Indiana carry advertising of quack doctors and proprietary medicine concerns which represent a violation of the above rules, we are wondering how soon the U. S. Bureau of Chemistry, through its legal department, will take action in an effort to suppress some of the misleading and dangerous promises or claims that are put forth by the conscienceless vultures who promise results from worthless treatment.

In November and December the Foot-and-Mouth disease is said to have been prevalent in various parts of Indiana, and to check the spread of the disease the government authorities, assisted by local veterinarians, instituted a rigid quarantine and recommended other measures of more or less importance. In the cities certain persons were delegated to shoot all of the pigeons with a view to preventing spread of infection through pigeons as carriers. Without any desire to be hypercritical, we are forced to the conclusion that a lot of senseless and unnecessary things are done in the interest of disease prevention among domestic animals, and a more idiotic procedure could not be adopted than the killing of a lot of pigeons which infest the downtown districts of our cities and scarcely ever get over two or three blocks from their roosting places. We admit that pigeons are a nuisance and they despoil public buildings and even the clothes of pedestrians by their droppings, but why kill them in a spectacular way under the absurd plea that they are the carriers of infection? There are a dozen more effectual means by which contagion is carried from farm to farm—not one of which receives consideration at the hands of our wiseacre veterinary friends. Not the least of these common modes of spreading contagion is that which goes with the visits of in-

spectors and others to infected districts, and the inefficient, or perhaps no sterilization accompanying the return from the infected farm. We believe in quarantine and the enforcement of all recognized measures for limiting the spread of contagious and infectious diseases, whether applied to domestic animals or human beings, but a certain amount of common sense should be displayed in this matter as in everything else. It may be all right to destroy—if it cannot be sterilized—everything which comes in contact with contagion that may be spread, but why destroy anything which is remotely removed from contagion and is not very likely to come in contact with it? If the slaughter of pigeons in the city is intended to prevent spread of Foot-and-Mouth disease from farm to farm, then destruction of crows, birds, dogs, cats and every other wild or domestic animal that can go from farm to farm is in order. If the destruction of pigeons is simply for the purpose of getting rid of a dirty pest, then that is quite another thing, but let the real reason for the slaughter be known.

DEATHS

Emma Day, widow of Dr. George W. Day, died January 11 at her home in Dublin.

David H. McDonald, M.D., aged 83 years, died January 17 at his home in Quincy.

Addie Fisher, wife of Dr. John M. Fisher of Lapel, died January 24, aged 60 years.

David H. Johnson, M.D., died at his home in Quincy, January 17, at the age of 83 years.

James H. Hoag, M.D., of Connersville, was struck by interurban car January 24 and died four hours later.

L. W. D. Jerman, M.D., of New Point, died January 3 at the Deaconess Hospital, Indianapolis, aged 77 years.

Mabel Freeman Wood, wife of Dr. Robert S. Wood, of Wheatland, died January 18, aged 31 years; and Robert Edward Wood, son of Dr. and Mrs. Robert S. Wood, died January 19, aged one day.

Charles Bowman, M.D., died January 12 at his home at New Albany in his ninetieth year. He had practiced medicine at New Albany for sixty-five years.

James O. Siddons, M.D., aged 78, died at his home in Marion, January 9. He was born in Putnam County in 1836, and was a graduate of Rush Medical College.

H. C. Summers, M.D., died January 11 at his home at Amo, aged 65 years. He received his medical education at the University at Louisville, Ky., and the Ohio Medical College at Cincinnati. He was a member of the Hendricks County Medical Society and the Indiana State Medical Association.

Patrick H. Caney, M.D., of Vincennes, died January 30, of pneumonia. Dr. Caney was born in Adams County, Ohio, September 19, 1860, and was a graduate of Vincennes University and the Kentucky Medical College. He had been a member of the City Board of Health for over twenty years, and was an active member in the Knox County Medical Society, the Indiana State Medical Association, and the American Medical Association.

John Wesley Gray, M.D., died January 24 at his home in Bloomfield. He had been in poor health for several months and unable to practice his profession, but death came suddenly from heart trouble. Dr. Gray was born at Springville, Lawrence County, Ind., November 28, 1839. He attended Indiana University, University of Michigan, graduated from Jefferson Medical College, Philadelphia, in 1864, and later attended Bellevue Medical College, New York. He was a member of the Greene County Medical Society, Indiana State Medical Association and was on the Greene County Pension Examining Board.

Allison W. Maxwell, M.D., of Indianapolis, died at the Methodist Hospital, Indianapolis, January 16, following an operation on January 2. Dr. Maxwell was born at Bloomington in 1848. He was the son of Dr. Darwin Maxwell, for many years trustee of Indiana University; a grandson of Dr. David Maxwell, one of the founders of the University, and he himself was dean of the Indiana University School of Medicine from its organization until he resigned that position a few years ago. He

was reared at Bloomington, was graduated from Indiana University in 1868 and from Miami Medical College, Cincinnati, in 1876, and was for one year interne at the Cincinnati Hospital. He was a member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association, and has served the city of Indianapolis in a number of public offices.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Dr. H. R. Allen, professor of orthopedics of the Indiana University School of Medicine, has gone to Arizona for a month's stay.

Dr. J. H. Ford has resigned from the surgical staff of the City Hospital, the duties on the hospital staff interfering with his practice.

Dr. Brown McClintic of Peru, who has been commissioned by the Russian government as a general, is now stationed at Kiev, Russia.

The city health board, Indianapolis, has decided to ask for a temporary loan of $65,000, to take the place of a similar loan that is about due.

Dr. Richard Pool, the new coroner of Marion County, has appointed as deputy coroners Dr. Paul Robinson, Dr. E. S. Knox and Dr. Herbert Wagner.

In appointing the staff of attending physicians for the City Hospital, Indianapolis, for 1915, the city health board created a consulting staff. Few changes were made in the attending staff.

The Indianapolis eye, ear, nose and throat hospital has been incorporated with $10,000 capital stock. This hospital is an outgrowth of the free medical clinic held at the Hillside Christian Church.

Indianapolis was represented on the program of the Northern Tri-State Medical Association, which met recently at Elkhart, in the person of Dr. A. C. Kimberlin, who gave an address on the diagnosis of tuberculosis in childhood.

The first Friday in October in each year has been designated by the legislature as Disease Prevention Day in Indiana. This resolution was backed by the Indiana Society for the Prevention of Tuberculosis.

The Indiana Federation of Clubs has sent a letter to each of the Indiana legislators, asking them to support the bill providing for the appointment of a trained health officer in each county, who will give his entire time to the work.

More than five hundred cases of tuberculosis have been reported in Richmond. Dr. W. F. King, assistant secretary of the State Board of Health, went to Richmond to meet a special investigating committee from Earlham College and other officials to discuss plans for combating the disease.

The Protestant Deaconess Hospital has appointed to its resident medical service Dr. Patrick J. Henney. Dr. Henney graduated from the Medical Department of the University of Louisville in 1911, since which time he has served with the resident staff of the Western Pennsylvania Hospital at Pittsburgh.

It is reported that Dr. John W. Sluss, recently resigned superintendent of the City Hospital, is preparing to leave for Paris early in the spring to take a position with the French army corps. He has appeared before the Indiana State Board in order to obtain the necessary certificate which will qualify him for service in the French army.

At a recent meeting of the Indiana State Board of Medical Examination and Registration, sixteen men sought licenses to practice medicine in Indiana. The following officers were elected for 1915: President, Dr. W. A. Spurgeon, Muncie, Ind.; secretary, Dr. W. T. Gott, Crawfordsville, Ind.; treasurer, Dr. Moses S. Canfield, Franklin, Ind.

At the twentieth annual meeting of the Big Four Railway Surgeons held at the Claypool Hotel recently, Dr. W. H. McGaughey of Greencastle was elected president; Dr. John C. Sexton, Rushville, vice-president; Dr. H. I. Nelson, Hudson, Mich., second vice-president, and Dr. L. A. Ensminger of Indianapolis was reelected secretary-treasurer.

The fourth annual meeting of the Indiana Society for the Prevention of Tuberculosis was held at the Claypool Hotel, Indianapolis, January 21. Dr. Charles J. Hatfield of New York, executive secretary of the National Association, was the principal speaker. The following officers were elected for the coming year: President, Walter D. Thurber, Indianapolis; vice-president, Dr. C. A. Hartley, Evansville; secretary-treasurer, Mrs. Ella B. Kehrer, Anderson.

The superintendent, Miss Laura Wilhelmson and six visiting nurses of the Public Health Nursing Association, are serving the public by caring for the sick poor in their own homes, giving instructions how to keep the home wholesome and sanitary. During October, 1914, the public health nurses in Indianapolis made 956 calls; in November, 1,010, and in December, 1,066. There are more than 1,900 public health nursing associations over the country doing the same work.

The will of William L. Higgins, Indianapolis, was filed in the Probate Court January 11. Mr. Higgins left the bulk of his estate, valued at $250,000, to be used in relieving the aged poor; however, the will states that this income is not to be used in maintaining a home for the aged poor, but that all aid shall be given individually. A sum of $50 a year for twenty-five years is to be given to the Little Sisters of the Poor. Another fund is to be used in assisting deserving young men in obtaining college educations.

A bill to provide for "all time" health officers has been introduced in the House of Representatives, and is fathered by Dr. J. N. Hurty, president of the State Board of Health. It is proposed by the bill that 103 health commissioners shall take the place of 556 health officers now employed. Under the provisions of the bill there would be 92 health commissioners, and in addition 11 city health officers, one for each city with a population of more than 20,000. The bill provides that these health officers would be appointed from an eligible list supplied by the State Board of Health, which would conduct examinations of applicants. In counties the appointed power would be vested in an ex-officio board composed of the county superintendent of schools, county auditor, and the presiding officer of the county council and in the cities of more than 20,000 population, the mayor would represent the appointive power. The salaries of the health commissioners would be graduated according to the population of the counties. It is proposed that the salaries range from $1,200 to $2,500 a year.

GENERAL

Dr. Samuel Hollis of Hartford City has been quite seriously ill.

Dr. G. A. Stevenson of Rising Sun has been seriously ill with pneumonia.

An antituberculosis society has recently been organized in Shelby County.

Dr. John C. Ross and wife of Bloomington have returned from a Florida trip.

Dr. and Mrs. W. H. Newlin of New London left January 18 for a trip to Houston, Tex.

Dr. Fred H. Weir, formerly of LaPorte, died January 2 at Portland, Ore.; aged 50 years.

Dr. George Taylor is a new physician, at Claypool, having recently moved there from Kentucky.

Dr. A. L. Marshall of Indianapolis has been in Chicago taking up some special work on the eye.

Dr. F. E. Bass, formerly of Morristown, has taken the late Dr. Moris Drake's practice at Shelbyville.

Dr. and Mrs. Albert E. Bulson, Jr., of Fort Wayne have gone to Florida on a short vacation trip.

Dr. N. M. Spradley has removed from Boonville to Chandler, where he will resume the practice of medicine.

Dr. Edwin Rinear of Mt. Vernon was recently appointed physician for the County Infirmary of Posey County.

Dr. S. G. Smelser of Richmond recently underwent a surgical operation at the Reid Memorial Hospital, Richmond.

Dr. E. L. Peter of Flora was reappointed physician and surgeon of the Vandalia Railroad Company at their January meeting.

Dr. Joseph Shonkwiler of Rockville has gone to New Orleans, La., to take post-graduate work. Mrs. Shonkwiler accompanied him.

Drs. J. C. Mast, S. O. Barwick and E. Holdeman were recently elected to membership in the Elkhart Academy of Medicine.

Dr. George W. Crile of Cleveland has gone to France with a corps of assistants and nurses to work in the American Ambulance Hospital in Paris.

The Kokomo Academy of Medicine has recently been incorporated under the state law, and plans are under way for the establishment of a free dispensary in that city.

Dr. W. J. Hurt of Waynetown, who has been at the Methodist Hospital at Indianapolis suffering from multiple neuritis, has returned home somewhat improved.

The March issue of the *Woman's Medical Journal* will be known as "Internal Secretion" number, and will contain an interesting symposium of papers on this important subject.

Dr. and Mrs. J. A. Varier and daughter Miss Eva Varier of South Bend are taking an extended western trip. They will visit San Diego, San Francisco, Los Angeles and other points.

Dr. Charles LeRoy of the Northern Hospital for the Insane at Longcliff has been appointed a surgeon in the United States Marine Corps and will be stationed at Kansas City, Mo.

The new Cincinnati General Hospital, Cincinnati, Ohio, will be formally opened to the public on February 20. Several addresses will be given by some of the prominent professional men of America.

A petition has been sent to Congress to revoke the war tax on tooth washes, pastes and powders on the score that it is a severe blow to the work that has been done in behalf of mouth hygiene.

Dr. J. R. Pearson and wife of Bedford have gone to Florida to spend the winter. Dr. W. H. Weir of Indianapolis, who has recently formed a partnership with Dr. Pearson, is taking care of Dr. Pearson's practice.

Dr. Fletcher Langdon announces the opening of the Winchester Hospital at Winchester, Ind. Patients are admitted to the hospital through their family physician only. No person is admitted on personal application.

At the annual election of officers of the Elkhart Academy of Medicine, Dr. George W. Spohn, Elkhart, was elected president; Dr. E. M. Hoover, Elkhart, vice-president, and Dr. Paul B. Work, Elkhart, secretary-treasurer.

Twelve automobile ambulances have been given to the Red Cross for use in the war zone by the students of Yale University, and the students of Harvard have given five. Each ambulance is equipped to carry two wounded men.

Dr. Fred M. Towles, formerly of Indianapolis, was injured at Ft. Wayne a few days ago by the falling of a heavy piece of lumber, which struck him as he was leaving his office at Ft. Wayne, causing a compound fracture of the right leg.

Dr. Paul B. Work narrowly escaped death when his automobile was struck by a Lake Shore and Michigan Southern passenger train on January 6. By some miracle he and his niece, Miss Margaret Smith, who was with him, escaped without injury.

Dr. Walter A. Gekler has resigned his position as superintendent of the Indiana Tuberculosis Hospital, near Rockville, and has accepted a position as superintendent of the City Tuberculosis Hospital of Chicago.

Dr. W. G. Crawford of Terre Haute has recently been elected president of the City Board of Health to take the place of Dr. F. G. McCarthy, who resigned to take up the work of township physician. Dr. J. E. Freed has been appointed a new member of the Board to take the place of Dr. E. T. Zaring, who also resigned.

The fifth mid-year meeting of the Medical Section of the American Life Convention will be held at French Lick Springs Hotel, French Lick, Ind., March 3 to 5, inclusive. The names of prominent men from all over the United States appear on the program. F. W. Foxworthy of Indianapolis is chairman of the Program Committee.

Dr. Simon J. Young, county health commissioner of Porter County, has taken an advanced step in public health work by equipping the Porter County laboratory for the work of making free Wassermann tests to all citizens of the county. This is an innovation, and New York is the only other state that has undertaken this work as a part of the health propaganda.

During January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Hynson, Westcott and Co.: Glycotauro Capsules (half size).

Eli Lilly and Co.: Alcresta Ipecac Tablets.

Merck and Co.: Cantharidin, Merck.

H. K. Mulford Co.: Luetin.

CORRESPONDENCE

VIGO COUNTY

Terre Haute, Ind., Jan. 27, 1915.

To the Editor:—I thought I would drop you a few lines to let you know something of the doings here in Vigo. Of course, in a political way the world knows our recent history, but in a medical way, Clay and Sullivan counties don't know what we are doing. Perhaps this is because we are charged with not being neighborly, but we hope to prove this is not true. On account of our extreme modesty our light has always been hid under a bushel. We are progressing, and for the past few years we have been meeting each Tuesday evening and increased our dues to five dollars and an occasional collection.

At the annual election in December, Dr. A. H. Caffee was elected president, Dr. F. H. Jett, vice-president, and Dr. F. G. McCarthy, secretary-treasurer.

The annual banquet was held the first Tuesday evening in January at the Deming Hotel. There was an unusually large attendance. The menu, service and surroundings were fine, and an air of pleasantry and good fellowship pervaded the crowd. The program was carried out according to the arrangement of the committee, but it was sincerely hoped by a majority of those present that next year the entertainment would be on a higher plane and with ideals and dignity becoming members of a learned profession.

One meeting every month or two is devoted to clinics at one of the hospitals. On January 12 it was held at the Union Hospital. There was a good attendance and a general good meeting enjoyed. Patients were brought before the audience from the wards, and in the discussion each member was given a chance to lay claims of being the professional town clock of the society and to air his ignorance.

On Tuesday evening, January 19, Dr. J. H. Bohn read a paper entitled "Minor Surgical Considerations with Special Reference to Use of Wet Packs to Infections of the Extremities." There was a good average attendance and the reading of the paper was listened to with interest. The writer emphasized three principles governing the treatment of these infections, viz., free incisions with competent drainage; thorough application of wet packs of some reliable antiseptic, and rest and proper support. I think everyone present had something to say on the subject, and by way of digression I want to say here that the very fact of free discussion by all the members of any paper — no difference what the subject may be—will inject more life in a society and create more interest and enthusiasm than anything else that can be done. To prepare and read a paper and then have it coldly ignored makes one feel like never attending another meeting. There is considerable work attached to it, even though it be copied from standard text-books and journals. If the society is to succeed and be a progressive and forceful organization it must garner and appreciate every effort put forth in its behalf.

On the evening of January 26, Dr. Forsythe read a paper entitled "Twilight Sleep in Obstetrics." This was a review of the literature and of the published reports of the clinics at Freiburg. "Twilight Sleep" or a state of amnesia in a woman in the active stage of labor is produced by the hypodermic injection of scopolamin and morphin. The writer gave the dose and technic as employed by its hospital advocates. The paper was discussed by perhaps a half-dozen members, but none of them had had practical experience with the drugs to produce this condition in a woman in labor.

Hereafter, at least until changed, the first meeting in each month will be in the form of a luncheon from 12:30 until 2 o'clock, at the Elks Club. This is an innovation, and its success will depend on the interest of the members in making a rather social gathering of this meeting with more of a get-acquainted program.

(Signed) A Member.

FEE-SPLITTING

Indianapolis, Ind., Jan. 15, 1915.

To the Editor:—The "fee-splitting" question has been acutely before the profession in this state for some time. The subject has been freely discussed, not only in medical meetings, but especially in private conversations where a franker expression of opinions for obvious reasons usually obtains. Therefore, it seems worth while to attempt to interpret what is in the minds of the majority of general practitioners on this perplexing subject, as gleaned from private conversations with many, and the public utterances of a few, all of which has been forthcoming as a result of recent agitation.

Without doubt the secret division of fees between internist and specialist is less popular in Indiana to-day than it was a year ago. This is due to the fact that the attention of the profession has been caught and held, for a moment at least, to the vital dangers of such a practice. A great many men had drifted into the method without a thought of its dangers to the profession as a whole, and they looked upon it solely as a solution of their one big problem of how to get their own compensation from patients who were later stripped by the surgeon. This brings us to the point of saying that the specialists who are opposed to fee-splitting and do not practice it have a duty to perform toward this large class of general practitioners, and if they don't discharge that duty they will be largely responsible for not only a continuance of past methods, but an increase of it. The non-fee-splitting specialist has it easily within his power to knock with one stroke the only prop upon which the argument of the fee-splitter stands, and that is, lend every assistance possible to the general practitioner in the collection of his own just bill for services rendered in the case operated.

Is there any more reason why a medical man should wait for payment than a surgeon should wait in a case requiring the services of both? There is not, and yet how many of our non-fee-splitting surgeons have volunteered to step aside and allow the internist to collect his bill first? The average specialist has considered himself the sole conservator of the patient's health and has rendered and collected his bill on such a basis. The spirit of arrogance and selfishness fostered by such an attitude has engendered in the minds of general practitioners an hostility to specialism that has worked great harm to the profession as a whole. It has made the way of the fee-splitter easy, for he has found many physicians disgusted with the attitude of specialism and in open revolt against a palpable injustice.

That the general practitioner has been guilty of asking or accepting a division of fees, therefore, must not always be viewed as an indictment of his honesty; rather would we be inclined to accept it in many cases as an expression of revolt against existing intolerable conditions, made such by the selfishness of specialists. This statement is not to be construed as in any sense condoning the vicious practice of fee-division, but rather to show that a man to whom an injustice has been done is not in a frame of mind to closely scrutinize his own conduct.

We believe, therefore, in the campaign against fee-splitting it is not enough for those who are opposed to it to loudly acclaim their innocence, but that they should go much farther and practice a consideration of the other man's rights, a practice which unfortunately has had but small place in past conduct of many.

M. N. Hadley.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

THE COUNCIL

The regular midwinter meeting of the Council of the Indiana State Medical Association was held at the Columbia Club, Indianapolis, Jan. 15, 1915, with the following members present: Drs. W. R. Davidson, first district; J. G. Jones, second district; Joseph D. Heitger, third district; J. H. Weinstein, fifth district; O. J. Gronendyke, sixth district; W. N. Wishard, seventh district; G. W. H. Kemper, eighth district; O. B. Nesbit, tenth district; E. E. Morgan, twelfth district; F. B. Wynn, president; A. E. Bulson, Jr., editor of The Journal, and Charles N. Combs, secretary.

The minutes of the last meeting were read and approved. The secretary reported that when he assumed the office four years ago, the bookkeeping of the association was simple and easily attended to. The inauguration of the medical defense feature, however, made the keeping of exact records in cases of correct membership a matter of vital importance. Since the association agrees to even defend the estate of a deceased member, it is necessary to keep the original receipts from the county secretaries for several years, and any loss by theft or fire would destroy all basis for furnishing medical defense to any member. These receipts already number about 10,000 and accumulate at the rate of over 2,500 annually. A large cabinet is needed for the purpose of housing these receipts as well as keeping correspondence, county secretary reports, councilor reports, various other files as well as numerous blanks that are subject to requisition by the county secretaries. The association had no file of its own transactions. Such a file had been accumulated at former times

by various secretaries, but it had always been destroyed by fire and loss. A fairly complete file of these transactions has again been assembled, and these most certainly should be well protected as it is becoming increasingly more difficult to find the old copies. For all these reasons the secretary petitioned for a burglar proof and fire proof filing cabinet. The council ordered the purchase of the same with the suggestion that it be large enough to provide for future growth. The printing bills for stationery for the use of the officers during the present year were also ordered paid.

A letter was read from Dr. Alex. R. Craig, secretary of the American Medical Association, concerning the advisability of sending organizers into the state to solicit new members, under the following conditions: First, the organizer to proceed only after consultation with the county secretary and solicit only such physicians as were marked eligible; second, the State Association to pay $1 for each new member actually secured and paid up. After discussion, the council declined to accept the proposal largely on the grounds that a too sudden augmentation of the membership might involve the medical defense fund in too much new business, and, secondly, because only fifty cents of a member's dues goes to the general fund and the remaining fifty cents would have to come out of the surplus.

Mention was made of the fact that at the LaFayette session some papers were read which had been read or printed elsewhere, and the Council reaffirmed its previous decision in construing the By-Laws to prohibit this practice. Chapter 10, Section 2, "All papers . . . shall become its property." The secretary was instructed to notify the Committee on Scientific Work concerning this rule.

Dr. Groenendyke asked for a discussion concerning the advantages or disadvantages of local county societies entertaining the district meetings, and it was decided that while no decision could be binding, it was thought best to discourage this plan, as any undue burden on the smaller societies might sooner or later work against the efficiency of the district meetings.

The secretary asked permission to have a business manager appointed, who would have charge of the exhibits at the annual meetings, to plan for the arrangements of the exhibits, solicit exhibitors, collect the fees, and be entitled to a commission for his services. The secretary was instructed to act in conjunction with the president in such an appointment and was reminded that the rule should be strictly enforced prohibiting the exhibition of any articles not approved by the Council on Pharmacy and Chemistry of the American Medical Association.

The councilors presented their annual reports, and made verbal comment on them. Dr. Bulson made a statement concerning the affairs of the official publication, The Journal, closing with a plea for the members to mention The Journal when answering advertisements or ordering any goods manufactured by any concern advertising in The Journal.

Dr. Wynn addressed the meeting concerning his plans for the coming year, outlining his ideas for the program. He suggested that in addition to a visiting orator for the general meeting, the different sections should also have at least one scientific paper by some outside physician of national importance. He severely censured the plan of having the House of Delegates meet on Friday morning during the time for holding the sectional meetings, and cited the fact that at the LaFayette session, the medical section was completely disorganized and could not begin at 9 o'clock on account of its members being in the House of Delegates.

At luncheon the councilors present were the guests of Dr. W. N. Wishard, who stated that he was resigning from the Council, the same to take effect April 1, 1915. This announcement was received with deep regret, and Dr. Bulson responded, voicing the general feeling concerning the loss which the Council would sustain when Dr. Wishard retired.

Dr. Bulson's tribute to Dr. Wishard recounted the fact that he led in the organization of the Council in 1903 and was its first and only chairman until he voluntarily relinquished that position one year ago. His wide acquaintance and professional standing throughout the state and nation, his keen insight applied to the problems of the association and his prudent foresight in directing the policies of the association together with his never failing interest and enthusiasm, and his unceasing labors have made him our most valued councilor. The social features which he has arranged for the various meetings of the Council, his cordiality and genial presence have done much to preserve the esprit de corps and have promoted harmony and efficiency rather than the unpleasant opposite. For these and many other countless services and pleasant associations, Dr. Bulson proposed a vote of thanks which was accorded with sincere unanimity.

Adjourned. Chas. N. Combs, Secretary.

SEVENTH DISTRICT MEDICAL SOCIETY

Nov. 19, 1914

The meeting was called to order in the pathological laboratory, Central Indiana Hospital for the Insane, Indianapolis, by the president, Dr. A. B. Graham, at 2 o'clock. The minutes of the previous annual meeting were read and approved. A letter from Dr. W. N. Wishard was read, presenting his resignation as councilor of the district, to take effect April 1, 1915. Motion carried that Dr. Wishard's resignation be accepted, and that a vote of thanks be extended him for his faithful and efficient service while councilor of the seventh district.

Paresis: Etiology and Pathology. Dr. F. C. Potter.

Etiology: Since Noguchi and Moore found spirocheta pallida in the brains of paretics, the etiology of general paresis is syphilis. From 2.5 to 5 per cent. of infected individuals develop paresis. Is there a special strain of pale spirocheta pallida with a predilection for nervous tissue, or do the nervous systems of civilized people offer a better soil for growth of this organism? Alcohol lessens resistance of all tissues to infection, and hence plays an important factor in the development of general paresis. Heredity is a small factor in this disease except in the juvenile form. Paretic dementia is two to five or six times more common in men than in women. Most cases develop between thirtieth and fortieth year; a few before twenty-fifth or after fiftieth. Mental symptoms follow luetic infection in five to twenty-five years, with the greatest number during tenth year. Gross pathological changes in the brain: First,

chronic external and internal pachymeningitis; second, chronic leptomeningitis with edema of subarachnoid space, most marked in frontal and precentral regions; third, dilation of ventricular system, with granular ependymitis; fourth, gross atrophies of cortex, especially frontal lobes. Fifth, atheroma and sclerosis of the vessels at the base. Microscopic pathology of brain: First, thickening of pia with lymph and plasma cell infiltration; second, narrowing of cortex with loss of normal cell stratification. Degeneration of pyramidal and Betz cells and their fibers; third, perivascular infiltration with plasma and lymph cells throughout the gray and white matter; fourth, spirocheta pallida in deeper layers of cortex, near degenerated nerve cells, but at a distance from the blood vessels; fifth, increase of glia cells and fibers in the cortex. The cord pictures vary with presence or absence of physical signs of tabes. Clinical pathology, i. e., laboratory findings in blood and spinal fluid: First, positive Wassermann reaction in blood serum in 85 to 95 per cent. of cases; second, increased pressure in spinal fluid; third, increased globulin content in spinal fluids; fourth, pleocytosis (cell count varies from 10 to 100 with the stage of the disease, and plasma cells are seen in about half of the cases). The cell count *must* be done within an hour after removal of fluid. Fifth, Wassermann reaction in spinal fluid in 85 to 100 per cent. of cases, varying with amount of fluid used; sixth, the presence of a typical curve with Lange's colloidal gold reaction.

Presentation of Cases of Paresis.—Dr. Max A. Bahr. Paresis is a chronic psychosis occurring generally during middle life, whose chief symptoms are a progressive dementia and progressive disturbance in coordination and finally paralysis. The clinical picture is modified in the most manifold manner by complication with diseases of other parts of the central nervous system, especially the spinal cord. There appears in the course of paresis successively with the increasing dementia the most variable psychopathic states, as neurasthenic, depressive, maniacal and even paranoid conditions. According to the clinical picture thus manifested we speak of depressed type, exalted type, agitated type and tabetic type. The most complicated ideas and the most recently acquired mental pictures are the first to become lost. Thus it happens that the abstract ideas become lost very early in the paretic, as these are always at the same time particularly complex. He can only relate indefinitely or not at all his passing experiences while his recollections of childhood at first still remain intact. In the later stage of the disease memory pictures acquired in youth are also lost. Weakness in judgment from the very ouset of the disease is quite marked. During the maniacal phase the picture reminds one of mania with its exalted emotional state and flight of ideas, but however, during course of the disease the dementia is recognized easily by the weak-minded content of association of ideas. The depressive state reminds one of melancholia with its retardation in the train of thought and depression. Here likewise the dementia runs parallel with existing depression and retardation of thought. The agitated type presents somewhat the picture of an acute delirium with marked incoherence in the stream of consciousness with many hallucinations and illusions. The delusional concepts at the height of the disease are very frequent. In the exalted stage, there are many grandiose ideas. In the depression state, delusions of poverty, of self-accusation and especially hypochondriacal delusions are found. The physical manifestations with laboratory findings are of special significance for the diagnosis of paresis, as are also a positive Wassermann and high cell count of spinal fluid with the presence of such symptoms as pupils which do not react to light and with irregularities and inequalities of the same; increased patella reflexes with incoordination, tremors, characteristic paretic speech, and especially paralysis of a transitory nature.

Case 1. M. N., aged 52. Banker and stock raiser. No history of syphilis ascertainable. Negative blood and positive Wassermann of spinal fluid with a cell count of 16 per cm. Two and one-half years began to show change in disposition and became absent minded. In past six months had several transitory attacks of aphasia about three or four weeks apart and which lasted a day or so. Became tremulous in his speech and incoordinate in his walking. Superficial and deep reflexes increased. No Gordon nor Babinski. Pupils irregular and do not react to light and only very sluggishly to accommodation. The emotional state is one of exaltation and delusions are grandiose in character and of feeble minded content.

Case 2. M. S., aged 41. Syphilitic infection fourteen years previous. Negative blood and positive Wassermann of spinal fluid with cell count of 36 per cm. Presents also the characteristic Lange colloidal gold curve. Patient is sad and presents numerous delusions of a hypochondriacal nature. Fear emotions are prominent and picture is one of melancholia. The various somatic symptoms are present and dementia is quite pronounced.

Case 3. J. M., aged 47. Presents history of a simple dementing type of the disease. He has never manifested any acute psychopathic manifestations, such as mania, melancholia or delirium, but simply a progressive mental deterioration. As is most usual in this type of the disease patient presents a ptosis of the right upper eyelid and also a paralysis of the internal rectus of the corresponding eye. Other somatic symptoms are prominent. Strongly positive Wassermann of blood and fluid. Cell count 31.

Case 4. M. T., aged 33. Female. Strong positive blood and fluid cell count of 67. Early in the disease she presented a mild euphoria, but since has taken on simple dementing type of the disease. Various characteristic somatic symptoms of the disease are present.

Case 5. C. R., aged 41. Presents a tabetic type of the disease. Positive blood and fluid with cell count of 39. Patient at first presented all the evidences of a locomotor ataxia, but recently evidences of paresis manifested themselves. Patient is very ataxic and is hardly able to stand on his feet unassisted. His reflexes are gone and has an Argyll Robertson pupil. Mentally he presents the grandiose type of the disease.

Case 6. W. W., aged 46. Contracted syphilis twenty years previously. Negative blood, but strongly positive fluid with cell count of 106. The patient was presented to demonstrate an agitated type of the disease or the so-called galloping paresis. His picture was one of acute delirium with many hallucinations and illusions. Was extremely incoordinate in his speech with pronounced psychomotor activity. As there is no further doubt of the syphilitic nature of

this disease the treatment is that of the treatment of syphilis. Our treatment as yet has been ineffective, although early treatment in the prodromal stage has produced very long remissions of the disease. As yet the "salvarsanized" treatment as proposed by Swift-Ellis has no advantage over the intravenous.

Neurological Clinic.—Dr. Charles F. Neu. Transverse myelitis resulting from Pott's disease.

Case 1. T. R., female, aged 30. Patient presents a spastic paraplegia; both lower limbs being paralyzed and helpless, although there is slightly more muscular strength in the left limb which patient is able to raise to a slight degree. Upper extremities are intact, as patient has perfect control of her arms and other parts above the lesion. Coordination of upper extremities is normal and no tremors are noted. There is a mild ankle clonus of right side which is barely noticeable on the left. No history of any convulsive seizures. Bladder and bowels are normal at present time, although she had retention of urine a few months ago and required catheterization. Patellar reflexes are both very greatly heightened as are also the plantar reflexes. Elbow reflex is normal. Both Babinski and Gordon reflexes are very pronounced. Pupils react normally to light and accommodation. Irritation of the peripheral nerves originating from a slight level above the lesion causes a spasmodic contracture of lower extremity of corresponding side. This is also followed by a marked erythema, transitory in character, probably the result of some vasomotor disturbance. This area probably corresponding to an irritation is also very hyperesthetic and hyperalgesic. There is loss of the epigastric reflex. Below seat of lesion there is rather pronounced hypesthesia and hypalgesia and also diminution to thermic sensibility. This disturbance of pain and touch sense is more pronounced in right lower limb than in left. In the leg it requires 3½ inches to feel two points on the esthesiometer and in the thigh 4½ inches. There is an area circling the body just below the breasts that is exceedingly hyperesthetic. Upper extremities intact for touch, pain and temperature. All special senses are intact. Trophic disturbances are noted in lower extremities as there is rather marked wasting of both legs which appears to be out of proportion to mere atrophy for non-use, suggesting anterior horn involvement. Upon the slightest change in temperature lower extremities become cold and the slightest pressure over the back causes intense redness. Patient presents on examination of back a kyphoscoliosis of lower dorsal vertebrae. Over the area which is most prominent there is a distinct redness and some pain on pressure. Slight change in percussion noted over the two sides of chest and breathing over left chest anteriorly is somewhat bronchial in type. Heart is slightly accelerated. Patient finds it impossible to sit erect with lower limbs extended and she must first flex the lower extremities before she is able to do so. Wassermann of blood negative. Occasional tubercle bacillus in sputum. Urine, negative. Blood pressure, 130.

Posterior Lateral Sclerosis.—Case 2, H. S., aged 65. Male. Contracted syphilis thirty-two years ago. Two years after became gradually paraplegic. First symptoms were ataxia, pupillary changes and sensory disturbances. Seven years later became helpless. Patient presents at present time: Pupils equal, slightly irregular, react sluggishly to both light and accommodation. Facial muscles, slight twitching about mouth. Tongue protrudes in medium line with coarse tremors. Lower extremities, marked spasticity, especially on left side. Dragging of left foot more marked. Knee jerks exaggerated, especially on left side. Ankle and patella clonus, present marked on left side. Bilateral Babinski marked on left side. Heel to knee and heel to toe tests show greater incoordination on left side. Gait and station, patient unable to move about without the aid of crutches. Cremasteric reflex absent. Upper extremities: Coordination poor, as evidenced by finger to fingers, finger to nose, alternate pronation and supination of hands, etc. Marked left side. Biceps and triceps jerk increased on left side. Muscular strength less on left side (patient claims he notices loss of power in left arm). No trophic disturbances present. Patient at present complains of constipation and urinary disturbances, but does not soil himself. Finger in rectum shows loss of tonicity of sphincter. Urinary symptoms such as dribbling after urinating and three ounces of residual urine (catheter) may be due to enlarged prostate and stricture, result of two attacks of gonorrhea. Sensation: At present time appears normal to touch, pain and temperature. Backache not complained of, but claims he has a pain in the right shoulder at times. No pain in legs. Mental examination: Oriented as to place and persons but not as to time. Memory and judgment fair. Entertains delusion referring to a hole in his throat. No evidence of hallucinations. Patient on ward is quiet, clean and obedient. Is pleasant and answers questions readily.

Chronic Myelitis.—Case 3. L. S., female, aged 42. Development of present condition dates back about three years. First thing patient noticed was a tingling sensation, especially in her extremities. This was soon followed by other paresthesias — later there was numbness. She had the sensation that she was walking on a cushion; also history states she had numerous constrictions around abdomen, also became gradually more helpless and has been practically unable to walk for nearly three years. Upper extremities are not involved and pupils are O. K. Patellar reflexes are slightly increased. Plantar reflexes are active and Babinski phenomena manifested in both toes. Ankle clonus is markedly noticeable and is bilateral. Muscular strength of lower limbs is very much impaired. Patient responds normally to sensibility to touch, pain and temperature, although it is slightly delayed. Patient's mind at present time is quite clear. She appears at times depressed on account of her infirmity. She believes that they are not justified in sending her here as she is not insane. She is well oriented and can give correctly much information pertaining to herself and surroundings. Faint Gordon reflex also present, and there is continuous hypertension of both large toes. No trophic disturbances. Negative Wassermann, complete hemolysis with .1 c.c. spinal fluid. Positive Noguchi. Cell count unsatisfactory because contaminated with blood.

Chronic Anterior Poliomyelitis.—Case 4, C., male, aged 42. Paralysis and atrophy of muscles of right leg. Wasting of the muscle is very pronounced. The limb is also shorter than opposite one and in walking patient generally drags impaired limb. Muscular strength is not, however, entirely lost as

patient can extend and flex the limb on request. Reflex of patella of the atrophied limb is absent; on opposite side it is present, if not slightly increased. No disturbances in reflexes of the upper extremities, and reflexes of the eye are normal. The bone of right leg is shortened. Drop foot is present and patient holds foot in position of talipes equino varus. Skin is inactive, often cold and sometimes dry and scaly over impaired limb. Faradic current markedly diminished in excitability, but reaction of degeneration is not distinct. Muscles of the trunk apparently are not involved. No Babinski phenomena and no history of convulsions. Negative Wassermann for blood and spinal fluid. Butyric acid test and ammonium sulphate test negative and no lymphocytosis.

Cerebral Thrombosis.—Case 5. E. S., male, aged 56. Patient suddenly during the night had a stroke, and became unconscious, but only remained so for about twenty minutes. At the expiration of that time he revived sufficiently to recognize several persons about him, who came to his assistance, among them being his brother. Patient was not, however, conscious of being paralyzed on the left side of his body until the next morning. Face was also paralyzed on left side. About three or four months after the paralysis, patient developed convulsions of the typical Jacksonian type, which he still occasionally has, generally beginning in the arm and face and involving the leg last. At times patient can tell for two or three minutes before an attack comes on. Is generally able to be up and about again in from thirty minutes to one hour after his convulsive seizure. Patient at present manifests paralysis on left side of body with almost continuous spasmodic contraction of right side of face, and probably from habit, with each contraction of the face he simultaneously draws his right hand to his face. There is decided decrease of sensibility to touch, pain and temperature on left side of body. Babinski phenomena on left side but none on right. Tremors of tongue and slight tremors of face, especially noticeable on muscular effort. Patella reflex on paralyzed side very much heightened. Sensation apparently normal on right side. Pupils react normally to light and accommodation. Blood pressure, 135. There were also presented cases of Bell's palsey and cerebral hemorrhage.

Paralysis Agitans.—Dr. P. H. Weeks. By paralysis agitans we mean a disease of advanced age which is almost exclusively confined to the motor apparatus, and is manifested by a characteristic tremor of the limbs, gradually increasing in severity and extent, subsequently affecting the trunk and also marked by general rigidity and slowing of muscular movements with increasing muscular tension. The disease is of progressive character and usually is fatal, but only presents precexhaustion and marasmus after a prolonged duration. Etiology: Heredity plays a certain but by no means a prominent rôle. Age is considered the principal factor. Paralysis agitans is most assuredly a disease of advanced years, although not actually of the senile period. It occurs almost exclusively after the fortieth or fiftieth year. It does not occur, as was formerly believed, with almost the same frequency in both sexes; the number of men predominate decidedly. Syphilis and alcohol have no bearing in the production of the affection. Profound psychical and somatic traumata, deadly fright, fear, horror and the like are predisposing factors. Symptoms: The symptoms may be divided into two groups, viz: (1) tremor, (2) muscular rigidity and muscular tension. The tremor, as a rule, begins gradually, almost invariably in the hand and unilaterally, more frequently on the right side than left, and is accompanied by feeble, rapid, yet scarcely noticeable oscillation first in the fingers and thumb. The movements gradually become more marked and more extensive, but slower. Finally, actual tremor occurs and continues in a mechanical manner for hours, and sometimes without interruption for an entire day. After the hand, the leg of the same side is attacked, and subsequently the whole extremity is involved. Muscular rigidity and muscular tension. The majority of the muscles of the body are apparently in a condition of increased tonus or slight tension which objectively may be determined and is combined with a peculiar difficulty in rapidly and easily bringing the muscles into play; hence there is a brief or rather a prolonged latency of voluntary stimulation. The much discussed symptoms, propulsion and retropulsion, depend mainly on their muscular rigidity which was long regarded as a constrained movement. In these two symptoms — the tremors and the muscular rigidity — the typical picture of paralysis agitans is based. It is recognizable at the first glance. In paralysis agitans the psychical functions and special senses are absolutely undisturbed. Mental activity and initiative are, as a rule, undoubtedly reduced. The pathological findings in this disease have not as yet shown anything of special significance. What has been found on autopsy is almost identical with the senile changes invariably found in the nervous system of the aged. In the majority of cases of paralysis agitans, even in the first stages, diagnosis is very easy. In the developed cases the picture is so typical and characteristic that the affection is recognizable at first glance.

Case 1.—S. W., female, aged 52. Patient was admitted to hospital Oct. 10, 1914. Duration seven weeks. Cause, old age. Melancholy, restless, sleepless, delusions of persecution and that she has inherited a fortune which she cannot secure. Wanders from home; goes toward the river and threatens to jump in. Cut her arm in several places with a razor with suicidal intent. Patient is very well oriented as to time, place and persons. Memory for remote events fairly well preserved; for recent, impaired. Stream of mental activity develops a very simple line of thought. Fair amount of school knowledge and general information for one of her advantages. Counting and calculation for simple problems, good. Insight and judgment, lacking. Wassermann, negative. In the case we probably have engrafted a psychosis of the senile type as mental symptoms point conclusively to that condition.

Huntington's Chorea.—Heredity is considered the principal etiological factor of this disease. In many instances the disease has been traced through several generations. It is claimed that when the affection skips one generation it becomes extinct. Huntington's chorea rarely ever occurs before the age of thirty-five; as a rule it runs a rapid course and does not respond to treatment. There should be no confusion in the diagnosis of this form of chorea with that of Sydenham's. The latter occurs almost exclusively among children. Shows a marked difference in tremors and muscular movements. Also a comparatively large per cent. of cases respond to treatment.

Case 1.—H. H., female, aged 46. Patient's choreaform movements were first noticed at age of thirty-five. Following these patient became depressed, entertained fear of becoming insane, had delusions of persecution, together with auditory and visual hallucinations. Later on she became irritable, quarrelsome and aggressive and demonstrated complete loss of self control by violent outbursts of passion. The movements were first noted in upper extremities and it was fully five years before they became as general as at present time. Although the chorea has existed for twelve years, the amount of mental impairment is very slight and not nearly as marked as is usually found in such cases. The case is considered a most typical one, and I shall not attempt to demonstrate the symptoms. To see the patient alone is conclusive as to the condition.

Discussion of Paralysis Agitans.—Dr. F. B. Wynn. In the matter of the diagnosis of this disease the thing imperative with us as practitioners is to recognize it early. Careful inquiry into personal and disease history should enable differentiation from the various toxic tremors such as alcohol, lead and senility. If we but remember that the seat of onset is the thumb and index finger of one hand, and that the tremor progresses to involve more and more muscle groups, there should not be the least difficulty in early diagnosis. Having recognized the malady early, we are then in position, I am convinced, to render the patient a real service by directing the course of his life so as to inhibit the progress of the disease. However we may view the influence of psychic shock and vexatious worries in etiology of the disease my own personal observation is that there can be no doubt whatever that these factors play a very important rôle in hastening development of the trouble. Hence our bounden duty is constantly to take into account all the elements of environment and domestic life, shaping them in such way as to shield the patient and hold the disease in abeyance.

Demonstration of Pathological Specimens.—Dr. F. C. Potter. (1) Brain from case of general paresis of five years' duration, showing marked edema of subarachnoid space; leptomeningitis of frontal and precentral region; focal atrophies of cortex of mental surface of ascending frontal and precentral convolutions; dilatation of ventricular system, and granular ependymitis of fourth and lateral ventricles. (2) Brain showing thrombotic obliteration of left anterior cerebral artery with atrophy of entire frontal and anterior half of precentral lobes. Hemiplegia and convulsions of two years' duration. (3) Brain showing thrombotic softening in distribution of right middle cerebral artery. Hemiplegia of specific origin of seven years' duration. (4) Brain with hemorrhage into left internal capsule. Right arm and leg, but not face, paralyzed; of four weeks' duration. Also intussusception in ileum without necrosis. (5) Heart and aorta, showing hypertrophy of heart and calcification of mitral and aortic valves, with dilation and calcification of arch of aorta. Arterio-sclerotic kidney with small hypernephroma. (6) Large hypernephroma of kidney, which gave no symptoms. (7) Multiple glioma of cerebellum, with history of vomiting, headache, gradual loss of sight and hearing (left side), ataxia (cerebellar), ankle clonus and Babinski on left side; of one year's duration.

Meeting adjourned at 6 p. m. and members assembled in the gymnasium for a buffet lunch. At 7:30 the evening meeting was called to order and report of nominating committee was as follows: Councilor, Dr. W. B. Kitchen, Indianapolis (term begins April 1, 1915, to fill Dr. Wishard's unexpired term); president, Dr. O. A. Province, Franklin; vice-president Morgan county, Dr. W. J. Sandy, Martinsville; vice-president Johnson county, Dr. R. W. Terhune, Whiteland; vice-president Hendricks county, Dr. T. G. Smith, Brownsburg; vice-president Marion county, Dr. C. E. Cottingham, Indianapolis; secretary-treasurer, Dr. J. V. Reed, Indianapolis. Motion carried that nominations be accepted and that above members be elected unanimously. Motion carried by rising vote that: (1) The society puts itself on record as commending in heartfelt terms the splendid service which Dr. Geo. F. Edenharter has rendered to the whole profession of Indiana and for that matter of the entire country in the establishment of a pathological building in connection with the Central Insane Hospital. For nineteen or more years we have noted with pride and appreciation the work, pathological and clinical emanating from this department. Again and again the medical profession of this city and state have been given scientific treats, similar to the present program, in which the later advances in mental and nervous disease are placed before the profession, greatly to their edification and instruction. Further, we wish to commend this work because it is proof that the state's unfortunates are receiving the best service that modern medicine has achieved. (2) We wish to express our sincere appreciation of Dr. Edenharter as a host, whose generosity and anxiety for our comfort and entertainment seems to have no bounds. May he be spared many years to continue his splendid service for the state.

The program of the evening meeting was as follows:

Psychoses Associated with Disease of the Ductless Glands.—Dr. F. W. Hutchins. For several years the study of neurology and psychiatry was looked on by some as a scientific pastime, but recent investigations and research are gradually clearing up many obscure points and the subject is rapidly approaching a more practical basis. Mental disease may be due to bad habits or training but in the great majority of cases, at least, there are organic changes of the structural nature. The auto-intoxications from the bowel have received much attention; but few cases show much skatol-indican increase. The Abderhalden test is not reliable as yet, but it offers hope for a reliable basis. It is claimed that organic cerebral alteration is accompanied by an increase of antitrypsin in the blood. The Wassermann test, colloidal gold, and the luetin test narrows down the doubtful elements. Still these tests with many others are negative in many cases in marked mental disease Some recent experiments help toward a further solution. The effects of anger on the coagulability of the blood, and adrenalin content and other changes accompanying emotional disturbances have been noted. The vasomotor experiments, the changing of character by the transplantation of ovaries, the somatic changes of puberty and the menopause, effects of castration, and many like experiments would indicate that the male and the female character and characteristics are not merely accidental. While ordinary disturbances of the ductless glands are not well recognized, there are many features that are still doubtful and possibly far-reaching. The recent work of Cush-

ing and Horsley on the pituitary, especially the hypothesis of the effects of diminished or increased posterior lobe extract, are of practical utility. Grave's disease and cretinism are only a part of the rôle which disturbances of the thyroid plays. At present it is still too early to come to a definite conclusion of experiments along this line, but the ovaries, adrenals, thymus, pineal, pancreas, parathyroid and many other glands, some as yet probably unknown, will be found to have functions widespread and in their effects of exceeding importance. Outside of certain specific functions the ductless glands probably exercise marked influence over chemical changes within the body, and their disturbance submit the individual, not only to decomposed food products, but to the toxic materials from their own defective metabolism. As the susceptibility of the various organs varies to different poisons it is possible that many mental changes may be due to chemical alternations resulting directly or indirectly from disturbances in the functions of the ductless glands. Several cases were presented as follows:

Case 1.—Young girl, 15 years of age, who presents marked features of adiposity with all evidence of hypopituitarism. The brother of this patient, a high-grade imbecile, is also confined to this institution.

Case 2 is a woman who presents hypo-ovarian and pineal gland disturbances. She has many of the characteristics of a male, as large growth of beard, characteristic male attitude in her gait and a coarse voice. Various cases with extensive and large goiterous condition were also presented. One case in which the goiter developed during pregnancy and another in which the development took place at beginning of menopause. Another case in which patient had convulsions which began at age of 22 and continued until she passed through the menopause. During this time, for five years, they had entirely ceased. Several other cases with hypopituitarism, marked mental deterioration, as indifference, apathy and lack of all mental activities and with negative Wassermann reaction, were also presented.

Paranoia.—Dr. John Harper. Paranoia is a psychosis of chronic nature characterized by a progressive, systematized system of delusions. The mentally otherwise being apparently unaffected, except as influenced by the delusions. Hallucinations may or may not be present, and if so, play an unimportant rôle. This psychosis, at the present writing, constitutes a very small percentage of cases admitted, as compared to previous years, the reason for this being that many cases formerly included under this heading are now more properly classed as paranoid of other psychoses, namely, dementia praecox. Etiology: The important predisposing cause is a defective constitutional basis, either inherited or acquired. The exciting cause includes mental stress, shock and illness. Pathology: Nothing definite known. Symptomatology: Onset insidious at beginning of which we may have a change of disposition, characterized by any of the following: suspiciousness, irritability, discontentment, etc. Eccentricity becomes marked. The very nature of the psychosis makes it difficult for such a person to adapt himself to his environment. Every day occurrences, passed unheeded by the normal, are falsely interpreted. Delusions, persecutory, expansive or both, are formed. All factors entering into their life are woven into the delusions until we have the essential characteristics of the psychosis; a progressive systematized system of delusions. Hallucinations may or may not arise. There is no clouding of consciousness, no marked mental deterioration, except possibly late in the psychosis. The other mental processes, i. e., emotion, judgment, etc., are apparently unaffected, except as biased by the delusions. Prognosis: unfavorable. Treatment: confinement.

Case 1.—Delusions of persecution. A. W., male, aged 40; mechanic; divorced. Admitted April 10, 1913. History: Annoyed former housekeeper with whom he was infatuated. Unable to hold positions on account of his eccentricities. Followed people on the street, peeps in windows. Entertained homicidal ideas. Considered a dangerous character. Autoamnesia: The present employer of this woman being jealous of him, influenced his various employers to discharge him in an effort to get him out of the locality. Failing to get the patient to leave, the same party influenced the woman to have the local authorities put him out of the way. In an attempt on his life, they killed some one else. Patient, being made aware of this murder by one of the participants while intoxicated, was adjudged insane by unlawful proceedings to silence him. Status presens: Aside from the above system of delusions and their influence on the mental processes, the mentality is intact. No hallucinations present. Physical examination negative.

Case 2.—Delusions of expansive nature with optical and auditory hallucinations. N. P. H., male, aged 63. Physician; married. Admitted Oct. 11, 1913. History: Committed to the Eastern Hospital, 1892 (age 41), where he remained until six months before admission to this institution. Previous to first commitment, patient was in habit of carrying a revolver and making threats. Acquaintances feared him. Claimed he was wealthy. Autoamnesia: Was appointed president of the S. C. S of the U. S. A. in 1855, when only five years of age, on account of certain reforms and inventions made prior to that time. In his official capacity he is making investigations of these institutions and refuses to discuss the same. When he is through he will leave and publish a detailed account in the newspaper. Patient presents the examiner with his card on which is his name and the following: "President of the Secret Service and Reform of the United States of America. Attest Christ—P (Power) God—Priest." The patient claims he both sees and converses with God relative to his duties. Status presens: Patient is beginning to show signs of mental deterioration. Physical examination: Senile changes.

Clinic on Dementia Praecox.—Dr. Albert E. Sterne. The three types of the disease were considered—paranoid, hebephrenic and catatonic. The predominating emotional disturbance in this condition is one of apathy, which is to be considered as much a mental deterioration as the loss of memory for past and recent events. Severe intercurrent fear emotions also occur. Delusional concepts occur very frequently. At the beginning it generally deals with the hypochondriacal delusional ideas. Persecutory ideas, especially in the paranoid type, are very frequent, but systematization, as a rule, seldom takes place. A leading motive about a definite dominating delusional concept is entirely wanting. The actions of the patient become at times entirely obliterated. They exert themselves but little or not at all. Some patients will remain in bed all day long. Other patients carry on senseless

monotonous occupation for days and weeks. Stereotyped movements or actions, as well as stereotyped attitudes are frequent. If the motor inhibition is very intense then the whole body assumes a catatonic position. Passive movements meet with an intense opposition. At times there is flexibilitas cerea. The negativism also manifests itself in hiding under the bed clothing, in the spasmodic closure of the eyes and often complete mutism. Stigmata of degeneration are very frequent. The nutrition of the patient is subjected to very decided fluctuations. Frequently body weight falls at beginning of the disease from refusal of food. On the other hand in terminal stage of the disease rapid increase of body weight is apparent. The paranoid type of Hraeplin, which also can be designated as paranoid dementia, is characterized by the fact that the dementia conceals itself under numerous delusions and hallucinations. The catatonic variety is characterized by the appearance of profound inhibitions. The motor picture is frequently one of catatonic stupor. The tendency of remission is common in all forms and in this remission an almost normal insight of the disease often exists. The disease occurs most frequently at time of puberty, although it may occur during all stages of life. The association of this disease with syphilis has recently attracted our attention by finding a positive Wassermann reaction in some 30 per cent. of the three hundred cases in which this reaction was tried out. The association of this disease with disturbances with the ductless glands, as brought out by Dr. Hutchins this evening, is most interesting, although as yet not thoroughly understood.

Paranoid type of the disease: Case 1. C. N., female, aged 22. Is one which shows that the development of the psychosis has been a process of evolution and extends over a great many years. The first real manifestation of her mental disturbance was at age of 14 when patient was working in a corn field adjoining a railroad, when a train stopped and several parties were seen to get off. At the same time she heard a distinct voice call to her and say, "Oh, my God! Can that be my child?" No one was in hearing distance of her at the time. In looking toward the train she thought she recognized some one looking at her through a field glass. This individual was rather a distinguished looking individual and from his appearance and attitude of authority, the patient believed that he must be the president of the road, which was the Santa Fe and whose president at that time was James J. Hill. As the auditory hallucination "Oh, my God! Can that be my child?" occurred at about the same time that the train stopped near the corn field, the patient immediately interpreted this voice as coming from the individual, whom she believed to be James J. Hill, the president of the Sante Fe railroad, and in consequence on this hallucination she has the logical delusional idea that the supposed Mr. Hill is her father. This being the case, her real father is only her foster father as she believes that she has either been kidnapped or placed in her parental home through fraud. "This is all clear to me now and if I had not accidentally found this out I would never have known who my real father is." She learned that the president of the road was named Hill by seeing an article a short time afterward in a St. Louis paper in which his picture appeared. Patient believes that this Mr. Hill is a descendant of Mary Queen of Scots and as she (the patient) is a daughter of Mr. Hill, she is the rightful heir to the throne (logical conclusion). She states that it was her great grandfather, Mr. Hill's grandfather, who was brought to America by Sir Walter Raleigh and that he was beheaded for treason for this offense. She also manifests delusions of poisoning and persecution, although the later delusion is not well fixed nor systematized. She admits that she has not been treated well for years by such people as her lawyers, county superintendents, brother and sister, but special reason can be given by the patient. On one occasion, before she was taken to the Missouri Hospital, she states that she was "drugged in a hotel by placing cocaine in her coffee." What effect did this have on you? "It made me almost blind and very dizzy and caused me great suffering. There was a gentleman with me whom they also wished to drug, but I notified him in time not to take his coffee and so consequently he was saved." She also believed that in a former institution there was an attempt made at one time to kill her. Also presents hypochondriacal delusions, as she believes she has cerebral hemorrhage, Bright's disease and nasal catarrh. Says that Mr. Hill has a stepson that she is to marry and, although has never been introduced to him, she has seen him at various times in public places, as parks, railway stations and made herself known to him. Patient, although presenting all the features of a paranoia, has shown also many characteristic manifestations of a dementia praecox, as when admitted, she was in a state of catatonia for several weeks almost to the extent of a flexibilitas cerae. She was mute, would not respond to questions put to her and also presented later numerous mannerisms, grimacing and childish features. Although the patient does not present any evidence of any actual memory loss, her general conduct and demeanor from the incipiency of the psychosis has been that of a dementia praecox. Orientation is undisturbed, excepting when in her catatonic state she presents a mild degree of confusion. Negative Wassermann. Cases, with photographs, were also presented demonstrating catatonia, flexibilitas cerae, stereotypes, mannerisms and negativisms.

Manic-Depressive Psychosis.—Dr. James S. Rushton. Manic-depressive insanity was formerly classified by older writers as three distinct diseases, namely, mania, melancholia and circular insanity. The maniacal cases were classified as mania, while all those showing depression were classified as melancholia. Where both phases, however, were present in the same individual the condition was termed as circular insanity. The manic phase is recognized by three cardinal symptoms; first, exaltation; second, accelerated flow of ideas; third, motor excitement. This is due to the fact that these three symptoms manifest themselves in a different degree of severity. This mania is divided into three grades; first, hypo-mania; second, acute mania; third, delirious mania. The depressive phase is also manifested by three cardinal symptoms; first, difficulty of thinking; second, psychomotor retardation; third, emotional depression. These, as in the maniacal phase, vary in the degree of severity. Consequently three grades of depression are considered; first, simple retardation; second, acute melancholia; third, stuporous melancholia. In the mildest form of this phase we get psychomotor retardation and difficulty in thinking. These patients take no interest whatever

in their surroundings and those about them. It is very difficult to get them to move about or even talk. They sit about the wards listless and dull. If asked to do anything they answer they are not able. Where the depression is not marked the facial expression may fail to indicate it. In many cases they realize their condition thus causing great distress. In acute melancholia the three cardinal symptoms are much more pronounced. The patients prefer to be alone, manifesting no interest to associate with others. They are very slow to move about. It is difficult to get them to talk and when they do it is usually in monosyllables and almost inaudible. There is a profound emotional depression. Their position is that of flexion, the head is flexed so that the chin rests on the chest, the shoulders are bent forward and the extremities are relaxed. The facial expression is that of sadness. Patients in this condition show self-accusatory delusions, thinking they are the cause of all the sin and wickedness in the world; also hold themselves responsible for the unfortunate condition of others. They have hypochondriacal ideas, such as that their bowels are stopped up, that they are affected with an incurable disease and that their heart is apt to stop beating. Consciousness is quite clear, however, although there may be some clouding. In the third grade, or the stuporous melancholia, the patients do not talk. They will lie in bed, have to be fed and have every want ministered to. Clouding of consciousness is marked. Manic-depressive insanity comprises about 15 per cent. of admissions to hospitals for insane. This disease is much more common in women than men. The proportion being about 2 to 1. The principal cause of this disease is hereditary taint. The course of this disease is marked by recurrence of attacks separated by lucid intervals. The single attacks vary in length from a few weeks to two to five years, the usual duration being from six to twelve months. The prognosis is favorable from the individual attack, but very unfavorable in view of the certainty of the recurrence. There is a tendency to mental deterioration only in a few cases, where the attacks are long, frequent and severe.

Case 1.—E. R., female, aged 33. Admitted to the hospital April 10, 1914. Nativity, Grant county, Ohio. Housekeeper; married twelve years; three children, youngest 3 years. First attack. The patient is destructive, restless, shows religious delusions, has hallucinations. Thinks her character is being questioned, uses profane and obscene language. She talks incessantly and refuses nourishment. Physical and neurological examination, negative. Urine, negative. Two Wassermanns, both negative.

Case 2.—A. B., female, aged 44. Admitted to the hospital May 29, 1911. Nativity, Hancock county, Indiana. Married twenty years. No children. First attack. Patient had been in ill health for several months. Melancholic, restless, seclusive and suicidal. One aunt very nervous. Father and brother very melancholic. Fears she will become destitute. Imagines no crops will be raised and that she will have to be taken to county farm. Physical and neurological examination negative. Wassermann positive.

The financial report showed receipts amounting to $26.19; expenditures, $40.35, leaving a deficit of $14.16.

Meeting adjourned.

Jewett V. Reed, Sec.-Treas.

INDIANAPOLIS MEDICAL SOCIETY

Meeting of January 5 — Hotel Washington

After reading of minutes of previous meeting, society elected to membership Drs. A. C. Weaver, John Diven, E. B. Rinker and Virgil H. Moon.

The secretary-treasurer's annual report was read and accepted.

Dr. Frank B. Wynn, in a ten-minutes' talk, urged members to attend the meeting of the A. M. A. and suggested a scheme for going in a body on a special.

A letter from Dr. G. H. F. House was read in which Dr. House thanked the society and the defense committee of the State Society for moral support and kindly assistance in a recent damage suit. Dr. House won the suit without submitting any evidence.

In his "President's Annual Address," Dr. Thos. B. Eastman read a very interesting paper on the life of Dr. Ambroise Paré. Motion carried unanimously that The Journal of the Indiana State Medical Association and *The Indianapolis Medical Journal* be requested to publish Dr. Eastman's paper.

The election of officers for 1915 resulted as follows: Dr. David Ross, president; Dr. Ada E. Schweitzer, first vice-president; Dr. George Coble, second vice-president; Dr. Alfred Henry, secretary-treasurer; Dr. E. F. Kiser and Dr. H. G. Hamer, members judicial council. The above were each elected by unanimous vote.

Dr. G. B. Jackson, one-year delegate; Drs. R. S. Chappell, J. V. Reed and D. W. Layman, two-year delegates; Drs. A. E. Guedel, E. A. Brown and Wm. F. Clevenger, alternate delegates.

Dr. Ross was escorted to the chair by Drs. Garshwiler and Graham and presented a gavel by Dr. Eastman, after which he expressed his appreciation of the society's action in electing him presiding officer.

Meeting adjourned. Attendance 135.

Alfred Henry, Secretary.

Meeting of January 12 — Hotel Washington

Meeting called to order by Dr. David Ross, newly elected president. Applications of Drs. J. Don Miller and E. C. Thomas were read for the first time. Those of Drs. Wm. J. Mellinger and George B. Jones, second time. Attendance 70.

Program: Paper, "Deviation of Nasal Septum and Submucous Operation," by Dr. Wm. F. Clevenger. The functions of the nose, in addition to being a special sense organ, are to warm, filter and moisten the inspired air. Nasal breathing physiologically a necessity. More fully understood by physicians in general since the advent of tonsilectomy superseding tonsilotomy and the submucous operation on the septum superseding ancient methods formerly used for correction of septal deviations and ridges and the present day methods used for correction of sinus infection. Neglected adenoid and tonsil hypertrophy in early life are responsible for septal deflections as arch of superior maxillary bone is changed from the normal in the absence of nasal breathing. The maxillary arch usually found high, constricted and narrowed in the child suffering from mouth breathing after passing fourth or fifth year thus producing in turn displacement of septum from median line. No septum should be operated under age of puberty, but after tonsil and adenoid mass has been removed child should be placed under care of a competent orthodontist for correction of maxillary deformity and

this procedure, in most instances will correct the existing septal deformity by bringing the mouth measurements to a normal standard of measurement. Sinus infections due to deficient drainage. Most cases result directly from a septum varying from median line, which produces by pressure hypertrophy of the adjacent tissues thus causing obstruction to natural drainage. No septum should be operated in syphilitic or hemophiliac. These are questionable risks as is the professional athlete. No danger accompanying procedure except middle ear involvement if certain definite rules are observed and this possibility reduced to a minimum if work is done in a hospital and proper care taken to avoid infection. The per cent. of questionable results are more or less in proportion to the lack of understanding on the part of the operator. Operation usually done under local anesthesia and with total absence of pain. Many neurological problems traceable to middle turbinal pressure and most important considerations. Voice production impossible in normal way without resonance and this function dependent on the post-nares being open which is necessary that accessory sinuses may produce their function.

Case report: "Hyperplastic Lymphadenitis," by Dr. W. S. Tomlin. Boy, aged 10, who had had five attacks of diphtheria in two years and between times was a carrier of infection. A second operation for thorough removal of tonsils and adenoids after a previous tonsilotomy was succeeded by an inflammatory hyperplasia which so filled tonsilar spaces as to be very deceptive and cause another tonsilectomy to be recommended by a confrere. Succeeding this last attack of active diphtheria after local applications had failed to control the hyperplasia or to eradicate the bacilli a series of cauterizations served to destroy the lymphoid nodules and the calculated scar tissue rendered surfaces smooth and child continues apparently recovered fifteen months after treatment. The condition is not to be confounded with granuloma. The condition occurs most frequently in over-clothed and improperly fed children who are in need of outdoor activity and renders them all subject to suspicion of being infection carriers, diphtheria, scarlet fever, et cetera. Local application of silver nitrate 12 per cent., tincture of iodin and Loefler's solution are indicated but usually it is necessary to employ some radical means preferably actual cautery to check proliferative inflammation. General tonics and iodids internally are of advantage.

Report of Safety Pin Cases, by Dr. Paul B. Coble. Case 1. Safety pin (open) passing through alimentary canal. Boy, aged 4 years, forced open safety pin into right side of nose, passed through nose and was swallowed. The father decided to await developments of nature, rather than have the esophagoscope used. Foods given that would form large bowel contents. Pin passed per rectum on the fourth day after swallowing. Child had no pain or any suspicious symptoms indicating that anything out of the ordinary was going on.

Case 2. Safety pins (open) lodged in larynx. Taken from service of Dr. J. F. Barnhill. Baby A., aged 13 months. For past six weeks previous to consultation had been treated for croup and bronchitis. No history of any foreign object having been drawn into respiratory tract. Skiagram by Dr. Cole showed open safety pin in larynx. This pin was removed through an upper tracheotomy wound under one-half per cent. of novocain anesthesia. Symptoms cleared very rapidly.

Case 3. Taken from service of Dr. J. F. Barnhill. Child, aged 5 years. Seen about twenty-four hours after lodgment of large open safety pin in larynx, upside down and prong imbedded below vocal chords. Ether given and pin removed through upper tracheotomy wound.

Report of cases: First "Popliteal Aneurysm and Endoaneurysmorrhaphy." Second, "Epithelioma of Penis with Radical Operation." Dr. Paul F. Martin.

Case 1. May 6, 1913, H. T., aged 43, fireman. Family history negative. Smallpox twelve years ago; G. C. four years ago. Three years ago a tumor formation in right chest, lanced and pus evacuated; general eruption over whole body at same time; lasted three months; no distinct history of luetic infection.

Present History: Seven years ago while at work felt a pain in left popliteal space; two days later swelling in same locality growing rapidly larger and extremely painful, unable to work. Admitted to hospital pulsating swelling size of large orange in left popliteal space, edema of whole extremity below knee. Urine negative. Wassermann positive. Temperature normal. May 19 edema having subsided operation of obliteratve aneurysmorrhaphy; anti-luetic treatment refused; swelling receding and blood circulation of extremity recovering promptly; no pain; no disturbances in sensation. T. P. R. normal throughout convalescence; in bed two weeks; resumed usual occupation of fireman at end of six weeks which he has continued uninterruptedly since without relapse of swelling, pain or interference with function in any way in past twenty months. Conspicuous feature is prompt uneventful convalescence and complete cure of aneurysm.

Case 2. J. W., aged 63. In 1891 first evidence of sore never entirely disappearing, growing gradually in size and remaining single, situated on dorsum of glans. In 1912 one-half of glans involved, new knob-like formation appearing with rapid growth and very painful. August, 1913, first examination by writer; lesion, not cauliflower growth usually encountered in this location, but single undermined ulcer with undulated edges as we see in cancer of the lip, involving three-fourths of glans, regional lymphatics enlarged and indurated. Urine negative. Wassermann positive. Section of growth epithelioma. The epithelium grafted on ulcerated gumma, new formation appearing one year before coming under observation of writer, probably marking beginning of epithelioma. July 18, 1913, operation. Total ablation of penis, and removal of lymph glans en masse and high castration. Antisyphilitic treatment advised and given. Conspicuous feature: after one and one-half years no evidence of recurrence, total freedom from annoying symptoms, complete control in voiding and restoration to health and vigor.

Discussion. Dr. C. H. McCaskey: It is interesting to study etiology of deviation of the nasal septum, as essayist has shown. Classified in two general ways, i. e., developmental and traumatic. It is a question, oftentimes, which of these has more to do with the production of this condition, but the following classification would, I think, indicate this more clearly. Developmental may be classified as follows: (1) Those produced by impaired respiration, due to adenoids, tonsils or obstructions. (2) Those produced

by infectious processes. The developmental are due to any cause which interferes with the growth of any of the bones which go to make up the nasal cavity and may involve any portion of the septum.

Traumatic: (1) Congenital, which later becomes developmental. (2) Those due to injury from external violence. The chief pathological condition, which obstruction produces, is improper respiration and upon proper respiration depends, to a great extent, the general health of the patient. Then local health of pharynx, larynx, ear, etc. Chronic sinusitis would be practically nil without chronic nasal obstruction of some form. As to the statement that "a greater majority of nasal obstruction is due to septal deviations," I quite agree and may say that size of obstruction does not have nearly so much to do with the amount of occlusion produced, as does location. Rhinologists never have been quite so well satisfied with the method of correcting these deviations, as at present, the operation of submucous resection seems to have solved the problem and now, is only to be improved by technique. The greatest danger, from the operation a few years ago, was the thought of getting a large post operative perforation, but the improved technique, if followed out carefully, is capable of producing fewer perforations than any operation, which has been devised on the septum.

Dr. Page: Children who have reached 10 or 12 years without obstruction being removed have deviated septums. On naso-respiration rests many things such as facial expression. Some of the deformities never recover. Is this hereditary or due to early infection and obstruction. Have seen child six weeks with complete occlusion. Those cases which have complete occlusion of nasal breathing demand operation. The oculist should discuss this question. There is now a decided relation between oculist, laryngologist and rhinologist. The orthodontist also should be considered and consulted. In Berlin and Vienna cocain and novocain are used as anesthesia. I use 4 per cent. cocain and crystals. It always should be done in hospitals. Any infection may result in sloughing. Finger sucking should not be overlooked. It causes many deformities.

Dr. Jackson: It is not my purpose to discuss this excellent paper of Dr. Clevenger's in detail, but simply to consider a few points which are of special interest to the orthodontist. I agree fully with the essayist regarding age for correcting a deflected septum. There are other means which may be resorted to in childhood that do not involve the same risks as those following submucous operation. Dr. Bogue of New York City, in a paper read at Leicester, England, a few years ago, made the following statement: "I find by an examination of many hundreds of aboriginal skulls, in the development of which nature has been free to work her will, that in all those cases where irregularities in the development and positions of the upper teeth exist, there were also irregularities in development of maxillary and palate bones and seemingly in vomer, sphenoid, and ethmoid as well, and that the nasal septum, particularly, is sure to be deflected." It would seem that deflected septum is associated with and probably caused, by altered structure of face due to a constricted arch and imperfectly developed maxillary bones. It is not logical to conclude, then, that expanding upper arch and stimulating normal development of maxillae and other bones of face that nasal septum may be brought back to a normal form and position. The orthodontist frequently expands the upper arch as much as one-half inch and it is well known that this change enlarges the nasal space quite decidedly. The orthodontist does not believe that removing adenoids and other nasal obstruction, will correct a mouth breathing habit of long standing unless mouth deformity is corrected. The constricted arch produced by mouth breathing causes the upper incisors to protrude. In addition to this, in most of these cases we have a retrusion of lower teeth, process and mandible. This retrusion or imperfect development of the process or mandible, or both, may be due to a variety of causes — perverted function, disuse, faulty metabolism, etc. Marked protrusion of upper incisors makes it almost physically impossible for the patient to close his lips and normal nasal breathing with the mouth open is impossible. Even if normal nasal function could be restored, nature cannot correct mouth deformity unaided as firm locking of cusps of teeth in an abnormal position requires a persistent, long continued, external force to move teeth and restore normal locking of cusps. The close pathological relationship of various structures in this region and the interdependence of the rhinologist and orthodontist have been recognized only of recent years.

Dr. Overman: Age is considered — 15 with all things favorable — of course younger in special cases. Cited case aged 6. Submucous done. Hay fever cured and aural discharge stopped. Expert technique does not mean all. Cited a case seen operated in New York. Returned with flat nose. Perforations should not occur, but do.

Dr. Tomlin: Question of perforation is trivial. Would put age limit lower than essayist. Have operated two cases under 10. The orthodontist should see many of these cases.

Dr. Neu: More emphasis should be given the prevention of deformity. Neurologists are called on to treat pain in head due to these naso-pharyngeal obstructions. Mental dulness often results.

Dr. Brayton asked effect of gum chewing and cracking nuts with teeth.

Dr. Jackson replied that it was recommended to chew hard gum.

Dr. Hoskins: The family physician is to blame largely for not advising parents and children that certain things will cause these deformities.

Dr. Clevenger closed the discussion. Meeting adjourned. Alfred Henry, Secretary-Treasurer.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of January 8

The regular meeting of the Muncie Academy of Medicine was held in the Muncie Y. M. C. A. building, Friday, January 8, and was called to order at 8 p. m. by President O. E. Spurgeon, M.D. The subject of arteriosclerosis was continued from the preceding meeting.

Dr. C. M. Mix presented a paper on "Prophylaxis," saying in part: "A clear understanding of the etiology of arteriosclerosis is necessary for a rational prophylaxis. Arteriosclerosis is a chronic progressive disease. Slow poisoning covers the ground fairly well. There are three kinds of slow poisons: bacteria, autointoxication and drugs. To these factors must be added overwork, anxiety, fear and other emotional

states. We can imagine individuals who by a happy combination of a placid disposition and fortunate environment are able to live long and die a physiologic death. This desirable result could be accomplished if we knew all about right living. The patient should be examined first to find out any foci of infections. Next, habits of eating, kind and quality of food, elimination, intestinal stasis, autointoxication. Finally: habits of work and play, alcohol and tobacco. With a clean mouth, nose and throat, a clean alimentary tube, clean generative organs, and no other latent foci of suppuration, with a negative Wassermann reaction, if the patient is leading a rational life as far as work and recreation is concerned and his habits of eating, drinking, sleeping and elimination are correct, he should be able to avoid this disease of modern civilization."

Dr. D. M. Green spoke on the "Treatment," saying: "Treat the patient, not the disease. Remove, if possible, the underlying cause. Persons with calcified arteries may be comfortable, while those with a moderate thickening may have severe symptoms. Heredity counts heavily. The patient should have agreeable surroundings and adhere to the simple life. Walking is beneficial, but in the more advanced stages active exercise must be limited. Moderation in all things, regularity and adequateness of elimination, sufficient unbroken rest and sleep, care in meat and drink are essential. Buttermilk is to be recommended. The iodides are the first thought in medical treatment. Thyroid substance may be employed in doses from 1 to 5 grains t. i. d. Saline cathartics in sufficient quantities to cause three or four watery bowel evacuations each day are of importance. Arteriosclerosis, in the later stages, loses much of its own identity and becomes merged with the symptomatology of diseases of the various internal organs, therefore the treatment must of necessity be directed toward that organ which gives evidence of trouble. Angina pectoris, due to sclerosis of the coronary arteries, calls for morphin and atropin, but iodin is the one drug of universal benefit, and especially so where the trouble is of syphilitic origin.

Adjourned. H. D. Fair, Secretary.

Meeting of January 15

This meeting opened with a very interesting and profitable quiz on "The Physiology of the Heart," conducted by Dr. E. S. Green. Among the questions asked and answered were:

What is the series of changes in the heart's motion called?

What is systole?

What follows auricular systole?

What is the length of time utilized in a cardiac cycle?

Why does not the blood pass backward into the veins, in auricular systole?

What is the relative strength of muscular dilatation of the ventricles?

What occurs when the force of the ventricular systole is greatest?

What quantity of blood is ejected with each ventricular systole?

Why is the force of the left ventricle greater than that of the right?

What prevents the auriculo-ventricular valves from being everted into the auricle during ventricular systole?

What events correspond to the pause immediately following the second heart sound?

What valves are open, and what valves closed during this pause?

The subject for the evening was "Blood Pressure," and Dr. O. E. Spurgeon read a paper describing and comparing methods and different apparatus in use, with their individual technique. The first manometer for determining blood pressure was designed in 1828 by Ludwig and Poisuille. Weights, springs and various other contrivances have been used to compress certain arteries and a relative estimate, fairly accurate was obtained. The mercury manometer is perhaps the most reliable and accurate, regardless of the manufacturer. However, Dr. W. H. Cowing in his book, "Blood Pressure Technique," strongly recommends the diaphragm type of instrument. The most satisfactory cuff should be 4¾ inches wide. The best pump is the metal type. More accurate results are obtained by using the femoral artery, but this is sometimes impracticable. The brachial is usually employed. The tube entering the cuff should be over the artery; the arm on a level with the heart. Air should be pumped in till the pressure is about 10 m.m. greater than necessary to abolish pulsation, then allowed to escape slowly. The reading at which the radial pulse is first perceptible indicates the systolic pressure. Through a stethoscope, placed over the brachial artery just below the cuff, there may be heard, at this time, a grating sound produced by the pulse. If the air be permitted to slowly escape, soon the sound in the stethoscope suddenly ceases. The degree registered on the dial or by the column of mercury now indicates the diastolic pressure. Maximum pressure produced by the systole of the left ventricle is called systolic pressure; the minimum pressure at the end of the diastole is called diastolic pressure, and the difference between systolic and diastolic pressure known as pulse pressure. Under certain conditions, as in marked grades of aortic insufficiency, the diastolic pressure may be zero. An apparatus has been constructed by Drs. Hooker and Eyster for estimating venous pressure, in which they use water instead of mercury."

In the discussion, Dr. D. M. Green said that the relation of diastolic to systolic pressure was as three to four. Systolic measures strength of heart, and diastolic indicates resistance.

Adjourned. H. D. Fair, Secretary.

Meeting of January 22

The quiz for this meeting was on the Vasomotor System, and was conducted by Dr. O. E. Spurgeon.

A paper on Hypotension was read by Dr. W. J. Malloy, who made the following observations: "A blood pressure below normal may be caused by toxins acting on the heart or controlling mechanism; sudden hemorrhage; diaphoresis; diarrhea or shock. Primary hypotension is described by Bishop as being present in cases where the blood pressure mechanism has failed, but where there has been no previous overdemand for pressure. Relative hypotension implies a condition where the pressure has been high but has fallen to a point where it may be apparently normal, yet the symptoms of hypotension develop. In men the normal lower limits of pressure is 105 m.m., in women 95 m.m., and is modified by age, muscular development and occupation. Hypotension is the rule with loss of vasomotor and cardiac tone. The most

serious effect on the heart is due to the accumulation of blood on the venous side so that the heart lacks blood on which to act. Treatment consists of adrenalin hypodermically, salt solution intravenously, digitalis or strychnin."

Dr. E. S. Green spoke on Hypertension, saying in part: "Hypertension is a condition wherein the systolic blood pressure is maintained at a level above the normal for the age and sex of the individual, and is a forerunner of change in the arterial walls. Early constriction is induced by one or perhaps all of the following causes, viz: stimulation of the vaso-constrictor centers, action on the vessel walls by irritating products of metabolism, and by stimulation of the activity of the ductless glands, by the same products of metabolism. Hypertension is not to be confused with the true high blood pressure of arteriosclerosis. The former is curable while the latter is not. It is a warning cry that calls for a change in daily habits or manner of living. Hypertension is usually associated with renal changes, but surely it is not necessary to wait the appearance of an incurable condition before a diagnosis can be made. Finding in the urinary sediment of epithelial cells from the uriniferous tubules of the kidney, accompanied by a blood pressure above normal is usually sufficient evidence. These cells are the most important of all epithelia found in the urine. Whenever present, with pus cells, even when no casts are found, the diagnosis of a pathological process of the kidney is certain, since they are never found in normal urine. Diagnosis is possible even before the most minute arteries have undergone any change."

Dr. D. M. Green reported a case (male, adult) who exhibited a temperature of 109 + and a pulse of 250 beats per minute, counted by a unique and original method. Dr. U. G. Poland told of a child with a transient temperature of 110. Recovery. Dr. F. E. Hill referred to a patient (a woman) with a recurrent temperature of 112. Recovery.

H. D. Fair, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of January 5

Society met in regular session in assembly room of court-house with eighteen members present. Meeting called to order by president.

CLINICAL CASES

Dr. M. F. Porter reported a case of meningeo-encephalocele. The contention has been in these cases that these protrusions would not occur less they were connected with increased intracranial pressure. This tumor came through in occipital region. Tumor was clamped off with an intestinal clamp and a Lembert suture so placed in meninges as to make it water tight before clamp was removed. This is the second case I have operated, the other one was done a number of years ago and is still living.

DISCUSSION

Dr. Duemling: The question of survival of these cases rests on two points; one, where spinabifida occurs and a quantity of the fluid allowed to escape at time of operation. It sometimes is very difficult to close opening in the bone. Use of wire filigree perhaps is best method. One case in which opening was large enough to admit several fingers into spinal canal was closed in this manner.

Dr. McOscar: Removal of spinabifida depends on position of tumor, the ones which occur highest up are easiest to close. If there is no nerve filament in sac or tumor, it is rather an easy matter to crush with the forceps and close the opening. The first spinabifida I ever saw was in the surgical clinic of the celebrated Gross in which he withdrew a certain amount of cerebrospinal fluid and injected an equivalent amount of solution of potassium iodid and iodin. The child died in a few minutes.

CASE REPORT

Dr. Duemling reported the following case: Female 3½ to 4½ months pregnant; pain in abdomen of sudden onset; vomited; worked all day, next day and then until noon of following day at which time she sought her bed; on third day pain became more severe and she called her physician who sent her to the hospital. Blood showed at this time 14,000 leukocytes; 81 per cent. polynuclear; pulse 96; temperature normal. Next day blood showed 19,000 leukocytes; 83 per cent. polynuclear. She did not present picture of a patient fatally ill; was not suffering much pain; abdominal tenderness quite marked, and situated opposite and to right of umbilicus at height of uterine tumor; pain was localized in this region. Operation revealed a gangrenous ruptured appendix; no adhesions; drainage was instituted and a post uterine drainage also established. Her post operative history, for the most part, was the same as we usually see in drainage cases of appendicitis. On the seventh day a sudden hemorrhage occurred from wound which bled profusely for a short time; hemorrhage stopped on repacking; abortion occurred during evening of seventh day; patient declined rapidly with all the signs of a violent sepsis and died on ninth day. We tried to combat this infection but all our efforts were of no avail. I think the hemorrhage in this case was due to the blood changes caused by sepsis.

DISCUSSION

Dr. B. Van Sweringen: I do not think the handling of this uterus during operation or surgical shock incident thereto, was responsible for abortion in this case. If that were true, this uterus should have emptied itself earlier than it did in this case (seven days). I think infection was the cause of abortion, that is, blood stream infection.

I reported a case of appendicitis occurring during pregnancy, and at this time operative interference was not demanded, but following delivery a mass developed and on operation appendix and colon were found involved in an abscess at cornua of uterus. Operation and drainage cured this case. I think it possible to handle a pregnant uterus rather roughly, for instance, as is often done in myomectomy.

Dr. M. F. Porter: I think the abortion, hemorrhage from wound and her death were due to an infected blood stream. I think this case emphasizes the importance of early operation in appendicitis in pregnancy. It also shows importance of avoidance of drainage, if possible. I have removed an eight-pound fibroid from a pregnant uterus without interrupting pregnancy. I have seen no less than three very ugly infections following use of rectus incision in a septic case. In absence of sepsis, it is a very good incision to make.

Dr. McOscar: The infection of a gangrenous appendix is sufficient to produce death in absence of pregnancy, so that death in this case was not necessarily due to the abortion but the cause of it. I have never had any experience with gangrenous appendicitis in pregnancy. I have had two cases of appendicitis during pregnancy but they were not gangrenous.

CASE REPORT

Dr. B. Van Sweringen reported case history of a case of hematuria and gave a brief review of literature on this subject.

DISCUSSION

Dr. Weaver: The point stands out most distinctly of mistake in diagnosis of a hematuria complicating an appendix. If cases of appendicitis which are operated, and appendix does not appear markedly diseased, could be studied further, we would find a chronic pyonephritis following a chronic appendix with an acute exacerbation accounting for pain in this region. Pyelitis would explain many cases of this type.

Dr. Duemling: The symptomatology of hematuria is so alarming that it overshadows the active lesion of the case and we are likely to overlook it. I had a case of a man who had attacks of hematuria covering a period of seventeen years. During the time in which there was no hemorrhage present, I did a cystoscopy and located a polyp. This growth was removed very early and he has not had any hemorrhage since. Bleeding in old prostatiques is not uncommon. I have at present just such a case.

Dr. M. F. Porter: Years ago when we had to deal with malaria, we had any number of cases of hematuria from quinine.

Dr. Morgan: I have a case now which has a hematuria; the patient is a young boy who seems perfectly well otherwise. I am unable to find the cause of this bleeding.

Dr. B. W. Rhamy: Outside of acute Bright's disease, from a laboratory point of view, hematuria makes one think of tuberculosis or stone. In elderly men we should consider the prostate as a possible source. Bleeding from bladder shows clots of blood in urine; in bleeding from kidney blood is diffused through urine without clots. Next to tuberculosis or stone in kidney, the most important thing to be considered is malignant disease of genito-urinary tract.

Dr. B. Van Sweringen: In a case of chronic parenchymatous nephritis where blood-pressure is high, you may have bleeding from genito-urinary tract as well as bleeding from any other membrane such as is common in cases of this kind.

CASE REPORTS

Dr. Beall reported the following cases: Male, aged 63, history of bloody stools for ten years. Worse in last six months. Failing strength for eighteen months, fever for six weeks. Necropsy showed carcinoma of tail of pancreas with abscess whose walls were formed by spleen, stomach and splenic flexure of colon. Spleen had appearance of fresh rupture, and abscess cavity contained fluid and clotted blood. There was a perforation into stomach and also into splenix flexure of colon without any apparent involvement, by the malignant growth, of mucosa of either viscera.

Mrs. P. T., aged 38. Personal and family history negative. Present illness began six weeks ago with multiple non-suppurating arthritis, the joints originally affected still being inflamed. Fever from 100 to 102 F., profuse sweats. Two weeks ago blood appeared in urine for one day. Great deal of nausea and vomiting all during illness. Nystagmus began one week ago. Mental impairment for two days. Points of interest in examination: heart rapid, 120, sounds not clear, but no definite murmurs, rotary nystagmus, paralysis of right external rectus, double choked disc, coordination of arms very poor, when sitting up tends to fall backward and to left. White blood cells 7,000. Normal differential count. Blood cultures aerobic and anaerobic remained sterile. Diagnosis: malignant endocarditis with probable septic embolus in cerebellum.

DISCUSSION

Dr. M. F. Porter: What killed the individual in Beall's first case was not the same condition which caused his bleeding for ten years. If you had examined gut more closely you would have found some other cause for bleeding.

Dr. B. Van Sweringen: This second case of Dr. Beall's strikes me as an organic nervous disease with joint complications. What that disease is, I am unable to say.

Dr. Weaver: I think tuberculin test and Wassermann would throw some light on this case.

Dr. M. F. Porter, Jr.: Speaking of a lesion of central nervous system in its relation to joint symptoms of this case, it is well to remember that joint lesions of organic central nerve disease are hardly ever multiplied and are not painful. It strikes me that joint lesions in this case are due to a general sepsis and probably not tuberculosis.

Dr. Beall (closing): It is conceivable that this patient has a malignant endocarditis. She may have some emboli producing these symptoms. A bacteriemia with an endocarditis would explain all of these symptoms. Origin of this sepsis may have been in ulcerated tooth that she recently had extracted.

Communication from Dr. G. W. McCaskey in reply to letter sent him at time of annual dinner, was read.

Application of Dr. W. B. Catlett was presented and referred to board of censors.

Report of committee on annual dinner received. A deficit amounting to $40.35 reported. Motion carried that these bills be allowed and an order drawn on treasury for same. Motion carried that the committee be given a vote of thanks for the splendid dinner and entertainment on Dec. 22, 1914.

Adjourned. G. Van Sweringen, Secretary.

Meeting of January 12

Society met in regular session in assembly room of court-house with twelve members present. Meeting called to order by president. Minutes dispensed with owing to temporary absence of secretary.

CLINICAL CASES

Dr. B. Van Sweringen reported case: Female 11 years of age; pulse 140; temperature 102; pain in abdomen; no abdominal rigidity; vomiting; rapid respiration. Laparotomy revealed long gangrenous appendix; adhesion in the pelvis; drainage.

Paper on "Review of Surgery for 1914" by Dr. H. O. Bruggemann. (This paper appeared in full in the January number of The Journal.)

DISCUSSION

Dr. B. Van Sweringen: A number of articles have appeared in the *New York Medical Journal* by someone who was a surgeon during the Balkan war. It was of interest to me to note that in perforating wounds of abdomen, primary dressing was all that was necessary for many of these cases.

Dr. McOscar: A new departure in surgical procedure is not necessarily a new thing in surgery. Many things advanced must await result of trial until their worth is established. The simpler the method of sterilization of field of operation and of hands of operator, the better. Iodin in my experience has been very satisfactory.

Dr. McEvoy: In list of reports from the battle field, these abdominal wounds are in persons who have been without food for a number of days. This fact probably accounts for good results by this simpler method of treatment.

Dr. H. O. Bruggemann (closing): Halstead reports that a cure of cancer of tongue by simple excision is possible. I remember of hearing a pupil of Von Bergman say that the cases of cancer of the tongue Von Bergman had cured had all been gummata.

Gott communication pertaining to proposed legislation by the disciples of chiropractic read.

Adjourned. G. VAN SWERINGEN, Secretary.

Meeting of January 19

Society met in regular session at Commercial Club with twenty-four members present. Meeting called to order by president. Minutes of preceding meeting read and approved.

CLINICAL CASES

Dr. M. F. Porter reported further on the case of meningocele. He referred to paper recently published in *Annals of Surgery* in which case report was made of child a few days old born with a meningocele the size of an orange. This tumor enlarged rapidly. It was removed by the same method as was used in my case. It was possible to detect some brain tissue in the sac which was replaced through the opening in the skull into the cranial cavity.

Dr. Rothchild reported following case history: Female, 59 years old; complaining of stomach trouble; loss in weight marked; looked emaciated; slight yellowish green cast to skin; history of vomiting undigested food stuff; has a marked aversion to meat; gastric analysis shows diminished hydrochloric acid; microscopically are long thick rods which may be Oppler Boas bacillus. I believe this woman has carcinoma of stomach. I mention the history of this case in order to emphasize the fact that in order to be of service surgically in gastric carcinoma, case should be seen early.

DISCUSSION

Dr. M. F. Porter: I think Dr. Rothchild's standing in regard to cancer cases is correct, but if I were to hazard a guess on the diagnosis of this case reported, I should say she had cholelithiasis.

Dr. Rothchild: Loathing of meat in cancer cases is a fact brought out by Kuttner of Berlin.

Dr. Rothchild reported in detail history of his own case of ureteral colic. He exhibited specimen of calcium carbonate stone which was passed via urethra.

DISCUSSION

Dr. M. F. Porter: Is it not unusual to see a calcium carbonate stone in ureter?

Dr. B. Van Sweringen: In my personal experience with ureteral colic, I found several things which were not in the books. At no time had I any pain in back, nor early in attack was it referred to testicle. Pain was remittent. Early in attack urine contained some microscopic blood; later became distinctly bloody.

Dr. Wallace: I had a case that was operated by another for appendicitis. Passed a stone via urethra four or five days after being discharged from hospital following his operation.

Dr. Zehr: I had a case of ureteral colic which morphin did not relieve, but who did get relief from a steam bath.

Dr. Weaver: It is not uncommon to see cases of stone in kidney and ureter in which pain on opposite side from location of the stone may be present.

Dr. H. A. Blosser: I believe that gelsemium assists these cases of ureteral colic in passing the stone. It is possible to paralyze the sphincters.

Dr. M. F. Porter, Jr.: Gave following reports on reactions following auto-sero salvarsan. In the majority of cases treated by intraspinous injections of salvarsanized auto serum some reaction is noticed, usually consisting of pain in back, legs or head with a moderate rise in temperature, usually two degrees. As a general rule cases of cerebral involvement react more markedly than strictly spinal cases. Reactions are explained by increased intraspinal pressure and "aseptic meningitis." Have seen but two serious reactions. First, in a man in middle life with marked cerebral symptoms and a few physical signs. Four hours after one-sixth the usual intraspinous dose, had general twitching and two hours later went into a deep stupor. Blood pressure rose from 150 to 195. Fourteen ounces of blood were removed by venesection and ten ounces of normal saline introduced. No spinal fluid was removed though this was the procedure indicated, I believe. Second case was a man of 34 with advanced tabes and with a charcot joint; had received two previous treatments without noticeable reaction. Four hours after third treatment suddenly ceased to breathe and was reported by nurse as pulseless, while an hour later under personal observation there was a sudden suspension of both respiration and circulation for an appreciable length of time. Patient became very blue and seemed in a serious condition. Preparations already having been made, lumbar puncture was done quickly and 15 c.c. of cloudy fluid withdrawn. There was no further trouble, although patient complained of rather severe pain and had somewhat higher temperature than is usual (101 1/5). Examination of the fluid showed it to be aseptic but contained 12,000 cells per c.c. This is of unusual interest in showing the remarkable reaction on part of meninges in so short a time as four hours. Patient since has remained well.

DISCUSSION

Dr. B. Van Sweringen: I do not know what the experience of others is in the reaction following any intraspinal medication. In Davers' Clinics, in an attempt to do a nephrectomy by spinal anesthesia, the same condition occurred following introduction of anesthetic into spinal canal as occurred in case detailed by Dr. Porter, and artificial respiration was necessary for several minutes before operation could be con-

tinued. It strikes me that any sort of intraspinal manipulation might be followed by this same reaction.

Dr. M. F. Porter: All intraspinal injections I have ever made in treatment of enuresis have been made in sacral region. I have never had any reaction following these injections, perhaps because they were never made into the dura. I think the explanation of enormous increase of cells into spinal fluid following intra-dural injection is due to production of an "aseptic meningitis."

Dr. Weaver: Draper cites cases of this type and thinks they are due to the pain incident to spinal puncture. Cerebral cases of specific disease are apt to show better laboratory results, and spinal cases of specific disease better clinical results following auto-serum treatment.

Dr. Hamilton: The fact that nearly all of these cases have a temperature following these injections would lend some support to the theory of Wagner in his treatment of paresis, i. e., that the temperature or reaction following this treatment is responsible for improvement. He produces this reaction by the use of numerous injections such as tuberculin, etc., and gets good results by this method.

Dr. Edlavitch reported following cases: Case of pemphigus neonatorum treated with serum. Baby N., aged 2 weeks, first child, full term, delivered by forceps, weight 7¾ pounds, breast fed.

F. H. Mother aged 31, never ill; father aged 36, has had eczema over chest, in axillae and around genitalia for past eighteen years.

P. I. Baby was well until two days ago (12/8/14) when a few blisters appeared on its face, and these soon spread all over body. Became restless but continued to nurse quite well.

P. E. No vesicles found at this time. On face, neck, thorax, abdomen, back, arms, legs, thighs and around genitals, superficial epidermis was peeled off over small and large areas, living exposed dermis which soon became covered with a thin layer of clear exudate. Following day this had become crusty so that these crusts covered almost all of child's body. Treatment: Mother bled (12/10/14), and 3 c.c. of the separated serum injected subcutaneously following morning. That afternoon 9 c.c. of serum given. Maternal aunt then bled, as it was impossible to get blood from mother's veins now. Of this serum 10 c.c. was given next morning and 12 c.c. that evening. This was followed by a subcutaneous injection of 5 c.c. sterile normal saline. No further treatment necessary, for condition then had practically cleared up.

Dr. McKeeman reported the case history of a child with malignant sore throat, glandular involvement, followed with necrosis of maxilla.

DISCUSSION

Dr. Edlavitch: The sequence of events in case reported by Dr. McKeeman seems plain. Tonsillar inflammation was of same type as inflammation in the jaw. This is a type of septic sore throat which is very severe. Glandular swelling and induration is characteristic. The blood in this case contained 40,000 leukocytes with a characteristic differential count. No blood culture was taken.

Dr. Calvin: I have seen a few cases of pemphigus neonatorum and all of them cleared up within forty-eight hours under any kind of treatment.

Dr. Rothchild: Fox reports a case of psoriasis and pemphigus treated by blood serum method, with good results.

Dr. M. F. Porter: I do not believe that this tonsil case could have gotten well under any circumstances, but I think that an operation or any procedure which opens up new areas of infection in a case of this kind is bad surgery.

Application of Dr. Catlett, acted on favorably by board of censors, presented. Motion carried that secretary cast unanimous ballot of society for Dr. Catlett. Ballot so cast.

Motion carried that if the program committee does not have in its possession by February 1 subjects sufficient to fill program, that they assign subjects to members.

Motion carried that secretary secure copies of the proposed legislation of the health board before our legislature for discussion in this society one week from date.

Adjourned. G. Van Sweringen, Secretary.

Meeting of January 26

Society met in regular session in assembly room of court-house with sixteen members present. Meeting called to order by president. Minutes dispensed with owing to temporary absence of secretary.

CLINICAL CASES

Dr. Rawles reported following case: Female, 17 years old; married; well until four days previous when taken with pain in right lower quadrant of abdomen; four months pregnant. Blood shows 80 per cent. polynuclears; abdominal rigidity and tenderness present. Diagnosis of appendicitis made. Laparotomy revealed hematoma in right broad ligament; appendix normal.

No discussion.

Dr. C. G. Beall reported following case history and exhibited patient: Mrs. P., aged 50. Family and personal history entirely negative. Present illness began one year ago with dyspnea and congestion of neck and face, which has increased progressively. No cough, pain or sputum. Has gained ten pounds in weight in past year. Physical examination shows marked congestion of face with marked dilatation of veins of neck and anterior right thorax. Thyroid enlarged, blood pressure, right arm, 190, left arm, 170. Blood and urine negative, luetic test negative, Roentgen ray shows solid mass occupying upper third of right chest continuous with structures of neck. This portion of chest is flat and breath sounds are diminished. Probable diagnosis malignant tumor of thyroid. Patient is receiving Roentgen-ray treatments.

DISCUSSION

Dr. M. F. Porter: This patient has something obstructing respiration and circulation in upper part of her thoracic cavity. This mass may be malignant or benign. In favor of malignancy is dilatation of veins of upper part of thorax and suddenness of onset of trouble. Given a goiter, no matter what its location, its sudden enlargement should arouse suspicion of malignancy in mind of physician. I am inclined to believe with Dr. Beall that the thyroid is involved and that it is malignant. The question above all is how is she going to get relief. I should recom-

mend Roentgen-ray exposures first, failing in that, an exploratory operation may be done with view of removing growth. If she has an involvement of thymus, this can be relieved.

Dr. Weaver: One thing not mentioned is possibility of a neoplasm originating in anterior mediastinal glands. I think there is no question that this is a solid tumor so that aneurysm may be ruled out.

Dr. Morgan: She may have had a sub-sternal goiter for years without symptoms, and it has taken on a sudden growth causing her present trouble.

Dr. Rothchild: Is lung compressed as much in back as in front?

Dr. Beall: Not so much as in front.

Dr. Rothchild: I think this fact would have a tendency to rule out mediastinal growth and favor goiter.

Dr. Rhamy reported the following cases: Chronic furunculosis of six months' duration in a man about 30 years of age. On his trunk and limbs there was not a half square inch free from marks of this infection, either a healed, active or beginning abscess formation. In view of the extent of this process a Wassermann test was advised to exclude luetic infection.

Another case was that of an infant 11 months old. Six weeks ago child was fondled and kissed by a visitor at the home (afterward found to be luetic) and baby now presented with a fully developed chancre on its lower lip of two weeks' standing, in which spirochetae pallida easily could be found. This case is presented as a horrible example to call attention of physicians to the important responsibility resting on their shoulders of instructing their patients fully of the danger of spreading syphilitic disease to innocent persons.

DISCUSSION

Dr. Weaver: I think that in the case of chronic furunculosis, it would be worth while trying the autoserum treatment. It is in this class of cases that Gotheil has reported such excellent results. I think the serum treatment would be better than the vaccine treatment in this case.

Dr. Beall reported following case history: N. W., male, aged 16. Infected abrasion below left kneecap followed by a subcutaneous abscess above patella. Abscess has refused to heal under drainage; hot antiseptic dressings; Bier's hyperemia and injections of iodoform emulsion.

No discussion.

Dr. Rhamy: Have you tried a solution of dahlia? It has been found that this drug is specific in certain forms of streptococcic infection.

Dr. Beall also mentioned a plan adopted in a recent quarantine for diphtheria at the I. S. F. M. Y., in which quarantine was not raised until cultures from nose and throat of infected individuals were negative to the Klebs-Loeffler bacillus.

Dr. Porter: The only precaution taken by our local board of health is to wait two weeks after the throat is cleared until quarantine is raised. I should like to introduce a resolution that the length of quarantine in diphtheria should depend on presence or absence of the Klebs-Loeffler bacillus from nose and throat of patient infected as proved by culture. Motion seconded and carried.

Motion carried that a copy of this resolution be sent to City and State Board of Health.

Motion carried unanimously that Fort Wayne Medical Society go on record as favoring a "whole time" health officer and a copy of this motion be sent to the State Board of Health.

Dr. Morgan presented the treasurer's report. President then appointed an auditing committee composed of Drs. Weaver, Rothchild and Beall.

Adjourned. G. Van Sweringen, Secretary.

DELAWARE COUNTY

The regular meeting of the Delaware County Medical Society was held Friday evening, January 1, in the Muncie Y. M. C. A. building, with President Melvin Mix, M.D., in the chair.

Dr. E. S. Fisher exhibited an excellent specimen of an aneurysm of the aorta, which developed about one year ago in a man of 40, and the symptoms of which were first noticed after the patient had unloaded a large car of coal in nine hours.

Dr. E. V. Boram of Oakville was elected to membership in the society.

The speaker of the evening was Dr. Wm. A. Hollis of Hartford City, who read a splendid paper on "Responsibility of the Physician in Nasal Practice," who said in part: "Conditions which most frequently bring patients to us are pain, crusts and the various discharges (the commonly called "catarrh" of the laity) and obstruction. No diagnosis should be made without getting a careful history and making a thorough examination, for it is true that even disorders of the nasal passage may be due to trouble as remote as the gastro-intestinal tract. Hyperemias sometimes clear up after the use of calomel and regulation of habits and diet. An operation should never be advised till after depletion of an abnormality in the nature of an obstruction has been tried, for what appeared to be a hypertrophy may turn out to be a hyperemia. Reflex pain may come from the head, teeth or eyes, the same as pain in these parts may come from the nose. In considering the types of nasal discharge we must take into consideration the several sinuses, for only a small part of the secreting membrane is within the nose itself. In making a diagnosis the shape and position of the septum with relation to the middle and inferior turbinate bodies, the space of one side, compared with that of the other, must be considered. These spaces sometimes contain polyps or pus, and if so the ethmoid cells are involved. There may be a sensation of stuffiness and the patient be a mouth breather in atrophic rhinitis. Such individuals suffer from air hunger because the mucous surface has been altered or covered with crusts. Meddlesome irritative treatment and cauterization is often the cause of this condition. The indiscriminate slaughter of the inferior turbinates, often in no more serious condition than intumescence, is to be deplored. The immediate results may be good, but invariably the patient will be annoyed with a troublesome pathology the balance of his life. If you must remove an inferior turbinate because of interference with function of the nasolachrymal duct or occlusion, and in the absence of a deviation of septum, remove no more than is absolutely necessary. I make a plea for the conservation of the nasal mucous membrane.

Dr. H. A. Cowing spoke for a few minutes on "Adenoids," saying that only since 1885 had adenoids become a recognized factor worthy of serious consideration. Adenoids have an anatomical and social phase. Some cases clear up under fresh air and better

surroundings. An operation is not always successful. Parents and teachers should be able to recognize the symptoms produced by adenoids and refer the patients for treatment.

In the discussion which followed, Dr. J. M. Quick defended the use of the cautery on the lower turbinates in certain conditions, contending that its proper use need destroy but little of the mucosa. However, there is no doubt but what its legitimate use has been abused many times. He also advised removal of all adenoids whenever they produce symptoms. There is no need guessing at a diagnosis. It can be determined by one of three methods: the laryngoscope, Holmes' nasal pharyngoscope, or by the introduction of the finger. The fear that the growth may return should not delay a needed operation.

Dr. C. E. Miller discussed the mucous areas involved in inspiration and expiration and cited beneficial results in operative interference when indicated.

The papers were discussed by Drs. G. W. H. Kemper, D. M. Green, J. C. Quick and F. A. Wildason, D.D.S., of Eaton.

Adjourned. H. D. Fair, Secretary.

KNOX COUNTY

The Knox County Medical Society met at Vincennes January 12. The paper of the evening was read by Dr. Maud Arthur, which was in part as follows:

Unto the woman He said: "I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children." What general practitioner has not witnessed the dire fulfilment of this scriptural malediction pronounced on the mothers of the race.

The American obstetrician is facing a new demand. The idea of painless childbirth has been spread broadcast through the land by the different magazines and especially those printed for women. The public is demanding that the American physician explain to them the disadvantages and the advantages of this method. It is the physician's duty therefore to place this method of childbirth before his patients in such a manner that they get a fair idea of dammerschlaf and not the perverted idea published in the lay press.

"Twilight Sleep," what is it? Dammerschlaf, as it is known in Germany, is a sort of semiconscious condition of the mind — a middle ground between sleep and wakefulness, or as Dr. Knipe says, "that blue border land from which it is possible to recall a patient immediately into consciousness." In fact the production of the physiological effect of scopolamin.

Process of administration and amount of the drug safely given were carefully worked out by Professors Kroenig and Gauss during two years' of daily experimentation.

By the Freiburg method one dose of morphin is given whereas scopolamin is repeated as indicated — the indication being not pain but memory. The object aimed at is to produce a loss of memory of pains, although she may be conscious of them at the time.

One of the foremost difficulties in the technic of "Twilight Sleep" is that of obtaining and keeping a reliable solution of scopolamin; as sterilization favors a quick deterioration of the drug. The depressing effect on the child is evident and babies are born dead or blue, requiring several minutes for resuscitation. However this occasionally is true at times when Twilight Sleep is not used. Scopolamin prolongs labor about one hour in the primipara and about one-half hour in the multipara. This method should not be practiced outside of a hospital as its technic cannot be observed in the private home.

There are hospitals developing this method, let us hear from them. The public is demanding this treatment; what are we going to do?

DISCUSSION

Dr. Davenport: I am a believer in the Bible and I believe the quotation which has been given. If a patient of mine was to have a baby I would not advise this method. I have had some very bad results with H. M. C. and I do not use it much.

Dr. Benham: If twilight sleep is a good thing it certainly would be a boon to our wives, mothers, daughters and sisters. Let us not be in too big a hurry to condemn a thing before we know very much about it.

Dr. Frigge: H. M. C. has been more successful in drunks than in labor cases in my hands. I shall be glad if the twilight sleep proves to be a good thing.

Dr. Arthur (closing): H. M. C. is not twilight sleep or any part of it. The technic is exceedingly hard to handle and cannot be given in the private home.

Dr. McCoy read an excellent paper on "Acne," which was thoroughly discussed by all the members present.

Adjourned. M. L. Curtner, Secretary.

LAKE COUNTY

Regular meeting of the Lake County Medical Society was held at the Gary Commercial Club, Thursday, January 14, Dr. J. W. Iddings presiding. Attendance, thirty-three members and three visitors.

Dr. Metcalf, chairman of the committee on county tuberculosis hospital, reported that he had addressed the county council at their January meeting and that the proposition to establish such an institution was favorably received. He stated that the council had appointed one of its members to attend this meeting of our society and ascertain what our wishes were in the matter. Drs. Hall (county health commissioner) and Nesbit then spoke for the society, giving their views as to present needs, and Mr. Herbert Erickson, the representative of the council, then addressed the society. He stated that the council was unanimously disposed to favor an appropriation for the purpose, and requested the society to formulate their plans and present the same to the council at a special meeting. The committee was given full power to confer with the council in the matter. Thus it seems we are assured of a county tuberculosis hospital.

Dr. William M. Bigger was elected to membership by transfer from the Washington County, Pennsylvania, Medical Society.

On motion of Dr. Shanklin a committee was appointed to draft resolutions on the death of Dr. David J. Loring of Valparaiso. He was a friend of organized medicine and in frequent attendance on the sessions of our society.

The secretary was authorized to procure a county society seal.

Dr. Allen B. Kanavel of Chicago, addressed the society on "Surgical Diseases of the Stomach." Discussion led by Dr. O. O. Melton.

Dr. Merz presented the results of his investigations regarding "Twilight Sleep." He reported that the leading obstetricians condemn the use of the method except under the most favorable conditions, and even then many decry its use.

Adjourned. E. M. Shanklin, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Cantharidin.—The anhydride of cantharidic acid preparations of cantharidin are used in place of corresponding preparations of cantharides and have the advantage of being cleanly, and more uniform in strength. A 0.1 per cent. solution of cantharidin in a fixed oil raises blisters when kept in contact with the skin (*Jour. A. M. A.*, Jan. 2, 1915, p. 53).

Benzene, Medicinal.—A liquid consisting almost entirely of benzene, C_6H_6. Medicinal benzene has been used in the treatment of leukemia. In many cases the improvement is such as to suggest an apparent cure. A large number, if not all, cases relapse or succumb to the toxic action of the benzene. The drug is in the experimental stage and should be used with caution (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Benzene, Merck, H. P., Crystallizable.—A brand of medicinal benzene. Merck & Co., New York (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Leucocyte Extract.—An extract of leucocytes obtained from exudates produced in the pleural cavity of rabbits or other animals. It is said to be of value as an aid to specific serums or antitoxins and vaccines. It is claimed to be of use itself where the nature of an infection is not known. Its use is in the experimental state (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Leucocyte Extract, Squibb.—A leucocyte extract prepared according to the method of Hiss. It is sold in syringes containing 10 c.c. E. R. Squibb & Sons, New York City (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Silver Citrate, Merck.—A brand of silver citrate admitted to New and Nonofficial Remedies. Merck & Co., New York (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Silver Lactate, Merck.—A brand of silver lactate admitted to New and Nonofficial Remedies. Merck & Co., New York (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Digitoxin, Merck.—A brand of digitoxin admitted to New and Nonofficial Remedies. Merck & Co., New York (*Jour. A. M. A.*, Jan. 2, 1915, p. 54).

Luetin.—An extract of the killed cultures of several strains of the *Treponema pallidum*, the causative agent of syphilis. It is employed for the diagnosis of syphilis. It is of use in the examination of tertiary cases, but rarely gives a positive reaction in primary cases or in untreated secondary cases. Luctin is supplied as:

Luetin, Mulford.—Packages sufficient for a single test, for five tests and for fifty tests. The H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Jan. 23, 1915, p. 343).

Glycotauro Capsules (half size).—Each capsule contains Glycotauro (see N. N. R.) 0.15 gm. Hynson, Westcott & Co., Baltimore, Md. (*Jour. A. M. A.*, Jan. 23, 1915, p. 343).

PROPAGANDA FOR REFORM

Stomach Bitters.—Experiments conducted by A. J. Carlson and his co-workers at the University of Chicago show that the widespread use of bitter drugs as a means of stimulating the appetite or aiding digestion is a therapeutic fallacy. He finds that such drugs as gentian, quassia, calumba, hops, condurango and the elixir of quinin, strychnin and iron do not increase hunger contractions of the stomach and the related phenomenon nor induce increased secretion of hydrochloric acid or pepsin (*Jour. A. M. A.*, Jan. 2, 1915, p. 58).

Bannerman's Intravenous Solution.—This solution was refused recognition by the Council on Pharmacy and Chemistry because vague, indefinite and misleading statements were made regarding its composition, because it was recommended for anemia, tuberculosis and syphilis under grossly exaggerated and unwarranted claims and because the intravenous injection of complex and indefinite mixtures is unscientific and dangerous. The proprietors having submitted to the Council a revised statement of composition and a revised advertising circular, Bannerman's Intravenous Solution was again refused recognition, partly because the statement of composition was unsatisfactory, but mainly because of the unscientific character of the solution and the unwarranted therapeutic claims which are made for it (*Jour. A. M. A.*, Jan. 2, 1915, p. 70).

Prunoids.—Prunoids (Sultan Drug Co.) are tablets said to be "Made of Phenolphthalein (one and one-half grains in each), Cascara Sagrada, Deemetinized Ipecac and Prunes." The A. M. A. Chemical Laboratory reported that Prunoids appeared to be essentially a phenolphthalein tablet. The Council on Pharmacy and Chemistry held Prunoids in conflict with its rules because the statement of composition was incomplete and therefore meaningless, because unwarranted therapeutic claims are made for them, because the name "Prunoids" does not indicate the chief constituent but gives the false impression that they depend on prunes for their effect and because it is irrational to prescribe a well-known drug under a misleading name (*Jour. A. M. A.*, Jan. 2, 1915, p. 71).

Sedobrol "Roche."—Sedobrol (Hoffmann LaRoche Chemical Works) is stated to contain "17 grains Sodium Bromid, 1.5 grain common salt, fat and seasoning" and to furnish "on solution in hot water, a very palatable bouillon." The advertising "literature" advocates its use for stage fright and arteriosclerosis and recommends the use of a large dose of bromid in the guise of a cup of bouillon in many conditions. It is even recommended to use Sedobrol in place of salt, simply to flavor food. The Council on Pharmacy and Chemistry held that Sedobrol, Roche was unscientific, that unwarranted therapeutic claims were made for it and that there was evident intention to mislead both patient and physician into useless and pernicious medication (*Jour. A. M. A.*, Jan. 2, 1915, p. 71).

Echtisia, Echthol and Echitone.—Echtisia (Wm. S. Merrell Chemical Co.), Echthol (Battle & Co.) and Echitone (Strong, Cobb & Co.) are proprietaries, each of which has echinacea as its chief constituent. In 1909 the Council on Pharmacy and Chemistry reported that the extreme and extravagant claims which are made for this drug are not supported by evidence. Echinacea is not often prescribed under its own name, but is commonly employed in the form of proprietaries, which in addition to echinacea contain other little used or obsolete drugs. To call attention to the unwarranted and often absurd claims which are made for this class of mixtures the Council reports on three of these: Echtisia which is said to be made from echinacea, wild indigo, arbor vitae and poke root, Echthol, which is said to be made from echinacea and

arbor vitae and Echitone which is stated to represent echinacea, pansy and blue flag. In each case it was found that most or all the extravagant and impossible claims which have been made for echinacea were made for the proprietaries and that in addition almost equally extravagant claims were made for the additional drugs contained in them (*Jour. A. M. A.*, Jan. 2, 1915, p. 71).

Theobromine versus Caffeine.—Lester Taylor finds that caffeine gives a moderate relief from the cardiac symptoms in myocardial insufficiency, but also causes the constant appearance of distressing nervous and gastric symptoms. He further finds that the clinical diuretic action of caffeine may be better performed by large doses of theobromin sodium salicylate, N. N. R. without the unpleasant side-effects (*Arch. Int. Med.*, Dec. 1914, p. 769).

Neurosine, Dioviburnia, Germiletum and Palpebrine.—The Council on Pharmacy and Chemistry reports on Neurosine, Dioviburnia, Germiletum and Palpebrine, shot-gun proprietaries typical of the polypharmacy of past decades, put out by the Dios Chemical Co., St. Louis.

Neurosine is said to contain, in each fluidounce "Bromid of Potassium, C. P. 40 grains, Bromid of Sodium, C. P. 40 grains, Bromid of Ammonium, C. P. 40 grains, Bromid of Zinc 1 grain, Extract Lupulin 32 grains, Cascara Sagrada, fl. ex. 40 minims, Extract Henbane .075 grain, Extract Belladonna .075 grain, Extract Cannabis Indica .60 grain, Oil Bitter Almonds .060 grain, Aromatic Elixirs." No physician would think of prescribing all of the drugs in Neurosine for any one condition. The Dios Company urges the use of this nostrum for a host of conditions and without due consideration of its potent constituents. Not content with recommending the promiscuous use of this already too complex mixture, the Dios Co. advises physicians to combine it with other drugs.

Germiletum is a member of a large class of alkaline antiseptics with excessively complex formulas. The formulas on different styles of Germiletum labels and circulars vary so much that one cannot tell what composition the exploiters of it intend to claim for their nostrum. Germiletum is recommended in many conditions and in a way to lead the physician to place false confidence in it.

According to the label every fluidounce of Dioviburnia contains "¾ dr. each of the fl. extracts, Viburnum Prunifolium, Viburnum Opulus, Dioscorea Villosa, Aletris Farinosa, Helonias Dioica, Mitchellae (sic) Repens, Caulophyllum Thalictroides, Scutellaria Laterifolia." The label also declares that Dioviburnia contains 18 per cent. of alcohol. As the named fluidextracts in the quantities given require a much larger content of alcohol in Dioviburnia, either the alcohol statement or the formula is incorrect. This complex preparation of drugs generally considered worthless is recommended by extravagant and unwarranted claims for a large number of widely differing female disorders. In a way the Dios Co. seems to recognize the inefficiency of Dioviburnia, for it frequently suggests that it be used in combination with drugs of known value.

Palpebrine is claimed to be a solution of stated amount of morphine sulphate, zinc sulphate, mercuric chloride, boric acid and salicylic acid. It is termed "A Reliable External Ocular Antiseptic." It is asserted that "With the assistance of Palpebrine the general practitioner can successfully treat all cases of external eye disease ordinarily encountered in his practice." Even more dangerous is the recommendation of Palpebrine for the prevention of ophthalmia in the newborn (*Jour. A. M. A.*, Jan. 9, 1915, p. 165).

Hayden's Viburnum Compound.—This preparation, according to the advertising matter, depends for its action on Viburnum opulus, Dioscorea villosa and aromatics. The label admits the presence of 50 per cent. alcohol. Its use is advised in the treatment of female disorders, cramps, etc. A report of the Council on Pharmacy and Chemistry states that, even if it contains the ingredients claimed (it has been reported that Viburnum opulus has not been on the market for years), the therapeutic action of the preparation depends almost entirely on the alcohol which it contains. The Council fears that the use of this preparation may initiate the alcohol habit in girls and women and publishes its report as a protest against its use (*Jour. A. M. A.*, Jan. 23, 1915, p. 359).

Peebles Epilepsy Cure.—The Dr. Peebles Institute of Health, Ltd., Battle Creek, Mich., advertises an "epilepsy cure." The "treatment" was examined in the A. M. A. Chemical Laboratory. It consisted of two bottles, "No. 1" and "No. 2." "No. 1" was a liquid containing extractive matter, had an odor resembling celery and valerian and contained 11.40 per cent. absolute alcohol. "No. 2" was a liquid, having a valerian-like odor and containing as essential constituents ammonium bromide and potassium bromide, equivalent to 16.8 gr. potassium bromide per fluidram, the recommended dose. Thus, the treatment consists essentially of bromides and is, in no sense, a cure and not free from danger (*Jour. A. M. A.*, Jan. 30, 1915, p. 455).

Radio-Rem.—The Radio-Rem outfit is advertised by Schieffelin & Co. It is said to produce water charged with radium emanation by inserting rods stated to be coated with radium sulphate in water. Not only is the internal use of radium emanation without proved value, but the amount of emanation said to be produced by the apparatus is far below the amounts generally used by those who believe in its efficacy. It is claimed that this outfit supplies a substitute for natural mineral water; but there is no proof that the value of mineral waters depend on contained radium emanation (*Jour. A. M. A.*, Jan. 30, 1915, p. 456).

G. G. Phenoleum Disinfectant.—This is a disinfecting solution sold by the G. G. Phenoleum Co., New York. It was found ineligible for New and Nonofficial Remedies by the Council on Pharmacy and Chemistry because unwarranted claims were made for it and because the disinfectant power was not stated on the label, as required by the Council (*Jour. A. M. A.*, Jan. 30, 1915, p. 456).

Phytin and Fortossan.—Phytin, sold by A. Klipstein & Co., New York, is an organic phosphorus compound, the acid calcium-magnesium salt of phytinic acid. The Council on Pharmacy and Chemistry rejected Phytin because unwarranted and exaggerated therapeutic claims were made for this product, based on the entirely undemonstrated assumption that phosphorus is assimilated only from organic combination, that a long list of diseases are due to deranged phosphorus metabolism and that such diseases are benefited or cured by Phytin. The Council also refused recognition to Fortossan, a preparation of Phytin and sugar of milk (*Jour. A. M. A.*, Jan. 30, 1915, p. 456).

Venarsen.—Venarsen, marketed by the Intravenous Products Co. for the treatment of syphilis, pellagra, tuberculosis, anemia, etc., is a secret preparation. One circular suggests that Venarsen is a sort of an improved salvarsan, but in reality it gives no clew whatever as to the real character of the preparation. Another circular suggests that Venarsen is a shot-gun

combination containing arsenic, mercury and other anti-syphilitic drugs. It is not only the right but the duty of physicians to know the essential composition of what they prescribe; a physician who uses a remedy the composition of which is kept secret, even in part, is not doing his duty to his profession nor to his patient. It is almost criminal for physicians to use a preparation of secret composition and to administer it by intravenous injection — a method which in itself is altogether likely to give rise to accidents (*Mo. State Med. Jour.*, Jan., 1915).

BOOK REVIEWS

The Practical Medicine Series, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery.

Under the general editorial charge of Charles L. Mix, A.M., M.D., professor of physical diagnosis in the Northwestern University Medical School. Roger T. Vaughan, Ph.B., M.D.

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Volume 5, Pediatrics, edited by Isaac A. Abt, M.D., professor of pediatrics, Northwestern University Medical School, attending physician Michael Reese Hospital.

Orthopedic Surgery, edited by John Ridlon, A.M., M.D., professor of orthopedic surgery, Rush Medical College, with the collaboration of Charles A. Parker, M.D. Series 1914. Chicago: The Year Book Publishers, 327 South LaSalle Street.

Volumes 1 and 6 review practically all of the important work on internal medicine. The important points of each article are mentioned. A most valuable feature is the editorial comment appended to certain of the abstracts. They are a good balance wheel.

Volume 5 covers pediatrics and orthopedic surgery. The most interesting parts are those on the infectious diseases of childhood, on which an immense amount of work has appeared; and in Part 2, tuberculosis of the bones occupies a prominent part.

This practical medicine series has earned deserved popularity and is very valuable to the busy progressive physician.

A Text-Book of Pathology for the Student of Medicine. By J. George Adami, M.A., M.D., LL.D., F.R.S., Professor of Pathology in McGill University, Montreal, and John McCrae, M.D., M.R.C.P. (London), Lecturer in Pathology and Clinical Medicine in McGill University, formerly Professor of Pathology in the University of Vermont. Second edition, enlarged and thoroughly revised. Octavo, 878 pages, with 395 engravings and 13 colored plates. Cloth, $5.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

Outside of the great clinical teachers probably no men are better known among medical men in general than the authors of this work. Their literary ability, study, and research work eminently fit them for the difficult task they have assumed of writing a text-book of pathology. At best, the subject is difficult to present and particularly so to the beginner in medicine.

One of the most admirable features of the work is that it is not burdened with arguments in support of various theories. When theories have to be called upon, the most logical one is presented for what it is worth without extensive comment. The work is thoroughly up to date and all of the real advances made in pathology have been included.

A new chapter on "The More Important Infections and Their Prominent Features," takes the place of the usual space devoted to "Bacteria and Their Relation to Disease." The manner of presenting this subject is somewhat unique but is entirely in line with latest views on bacteriology.

It is questionable, in the present unsettled state of knowledge, whether the attempt to simplify the classification of tumors, has accomplished very much in the way of simplicity.

The work is very well illustrated with new cuts, and the index is excellent.

As a text-book the volume may be placed next to Osler's "Practice of Medicine."

A Manual of Practical Hygiene for Students, Physicians, and Health Officers. By Charles Harrington, M.D., late Professor of Hygiene in the Medical School of Harvard University. Fifth edition, revised and enlarged. By Mark Wyman Richardson, M.D., Secretary to the State Board of Health of Massachusetts. In collaboration with the following officials connected with the Massachusetts State Board of Health: H. W. Clark, Chief Chemist; X. H. Goodnough, Chief Engineer; William C. Hanson, H. W. Clark, Assistant to the Secretary; Hermann C. Lythgoe, Chief Analyst of Food and Drug Department; and George H. Martin, formerly Secretary to the Massachusetts State Board of Education. Illustrated with 24 plates in colors and monochrome, and 125 engravings. Lea & Febiger, Philadelphia and New York, 1914.

Hygiene has become such a broad subject in recent years that it is hardly possible for any one now to adequately cover all branches of the subject in a competent manner. The author of this book has recognized this, and has therefore had expert specialists revise the chapters pertaining to hygiene. The subject of foods has been in charge of Mr. H. C. Lythgoe; that of water supply and disposal of sewage, Mr. H. W. Clark; disposal of garbage, Mr. X. H. Goodnough; hygiene of occupation, Dr. W. C. Hanson; medical inspection of schools, Mr. G. H. Martin. Prof. Theobald Smith has made suggestions concerning the chapters on infection, susceptibility and immunity, and that on the relation of insects to human disease. From this it will be seen that the book is comprehensive and authoritative in the highest respect.

The portion of the work relating to foods is very extensive, taking up almost one-third of the volume. Their nutritive volume, digestibility, contamination, keeping qualities, and adulterations are fully discussed. The physical and chemical tests for the quality of the various foods are given as well as the tests for adulteration.

The chapters on the hygiene of occupations and the medical inspection of schools deserve mention.

The fact that chapters appear on military, naval and marine hygiene, gives evidence of the thoroughness with which the subject is covered.

The book will prove a valuable one to health officers and physicians directly interested in the subjects which have to do with hygiene.

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ORIGINAL ARTICLES

NITROUS OXID ANESTHESIA IN OBSTETRICS *

THIRD REPORT

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INDIANAPOLIS

The following is a brief report of the present state of obstetrical anesthesia with nitrous oxid. The first report on this subject was read before the Indianapolis Medical Society in October of 1911. The second was presented before the New York Society of Anesthetists in November of 1912. In the present report I shall consider the progress of the application of nitrous oxid in obstetrics from the beginning.

It is well here to state why this subject was selected for investigation as well as to review briefly some of the literature on chloroform and ether. Investigation of this subject was inaugurated in a further effort to find a safer and more efficient means of allaying the suffering of labor. We know the danger of chloroform to both parent and offspring, and in spite of the fact that it is more efficient and rapid in its action than ether, it is being rapidly abandoned in favor of the latter drug. Some men still adhere to its use, but it is difficult to understand their reasoning. Some authorities rather freely support it but the great majority advise ether in preference. Those who do support chloroform do so qualifiedly, stating that, because of the visceral degenerative changes which it produces, its use should be very cautious and confined to a short period of time. Those who have abandoned chloroform and have adopted ether in obstetrics, have accepted ether, not as the ideal agent by any means but as the least harmful drug available that will efficiently control the pain of labor.

Simpson in 1847 introduced ether as an obstetrical anesthetic but abandoned it a short time later when the anesthetic properties of chloroform were discovered, giving his preference to chloroform because it was less irritating, apparently less nauseating and more rapid and decisive in its action. Since that time various other anesthetics have been tried by investigators who were not satisfied with chloroform and ether. Among these are morphin, chloral, local anesthesia of the cervix, spinal anesthesia, the introduction of cocain or its derivatives into the sacral canal, the hypodermic introduction of scopolamin and morphin, and numerous other agents, the advancement of which have been insufficient to get them freely into the literature. Of these agents, perhaps the morphin scopolamin combination has had the greatest trial, but the successful use of this method seems to be pretty well confined to the Freiburg Frauenklinik. None of these measures have met with very general success. However, the motive behind their introduction has always been the same. We are looking for something that will relieve the suffering of labor, the use of which is convenient, pleasant, harmless and efficient, and ether is at present the choice of most men.

Ether is convenient and efficient but it is neither pleasant nor harmless. Obstetrical authorities in general declare that ether is safe, but unless it be carefully administered with the object of securing the desired state of anesthesia with the smallest possible amount of the drug, or if it be given over a long period of time, it is apt to produce several annoying or alarming conditions. One of these is a diminution of uterine contraction with a consequent

* Read before the Indiana State Medical Association at Lafayette, Sept. 24, 1914.

predisposition to post partum hemorrhage. Also, because of this lessening of the normal contractility of the uterine muscle, there is certainly a greater possibility of the entrance into the blood-stream, through the uterine wall, of pathogenic organisms. Thus, one of nature's strongest defenses against puerperal sepsis, namely the closely contracted uterus, is broken down.

According to Turck of Chicago, by animal experimentation, ether even in small quantities was found to lower the hemoglobin percentage in the blood to such a degree that it returned to normal only after a period of four to ten days, and to produce a decrease in the antibodies of the blood, thus rendering the organism less resistant to invading bacteria. Here we have another of natures defenses crippled. Graham of Chicago, showed by experimentation that ether materially reduced the activity of the phagocytes. Crile found a distinct organic change in the brain cells of etherized animals. Ferguson of Philadelphia claims the solution of certain fatty constituents of the body and particularly the nerve cell lecithins by ether, attributing to this action the slower recuperation of etherized patients. We have accepted for many years the belief that ether may precipitate an acute nephritis; that it is not infrequently the direct cause of fatal pneumonia; that it impairs directly and to a considerable extent the normal functions of the liver and entire alimentary tract.

Now can we in the face of these facts, conscientiously dispel the thought that this ether toxemia may render the breast-milk of the mother less nourishing to the offspring and that it will render the offspring less capable of accepting to ultimate and proper assimilation, nourishment of any sort? Neither can we conscientiously dispel the thought that this toxic impairment of metabolism and bacterial resistance which has been proven true in the immediate subject of ether anesthesia, may affect in the same way the new-born babe at a time when it needs its normal metabolic function and normal resistance most.

Ether produces muscular relaxation and retards the normal progress of labor. It is comparatively slow in action and the patient, in order to obtain the analgetic effect of it quickly must inhale it in concentrated vapor. To many, the deep inhalation of a concentrated ether vapor is impossible, and to all it is extremely disagreeable. However, nearly all women in labor are willing to try it because they want relief from their suffering.

Nitrous oxid is not an ideal obstetrical anesthetic. It has its disadvantages, but these I believe are few as compared to ether. Chloroform is out of the question except in rare cases and need not be used for comparison in this paper. This is said not without sincere respect for the conscientious and earnest doctors who have used it for so many years, doing so much apparent good with so little apparent harm, and who are loath to place upon the shelf that which has served them so well. But its time has passed, and I believe that so far as obstetrical anesthesia is concerned, ether must also pass, giving place to something better. What that something will be is impossible to predict. It may be the better application of scopolamin. It may be the better application of nitrous oxid, or with our rapid strides forward in the allied sciences which future medicine must encompass, it may be something entirely unthought of at this time.

Nitrous oxid properly administered has many advantages over ether in obstetrics. I have stated most of these advantages in previous reports, but it is well to recount them briefly here.

1. So far as we know, it is an innocuous gas and when given for long periods of time in full anesthetic dosage it seems to produce no degenerative changes in any of the body tissues and only a slight intoxication which is extremely transitory.

2. It does not produce muscular relaxation beyond the relaxation of normal sleep and has no noticeable effect on the contractions of the uterus. Labor is retarded very little if at all. Therefore, there is no predisposition to post partum hemorrhage from the uterus; and because of this retained uterine tone, involution is not delayed, the channels are closed as they should be, and pathogenic bacteria if present in the birth canal are not so liable to gain entrance into the blood-stream.

3. It does not reduce the hemoglobin percentage in the blood. Neither does it produce an hemolysis nor impair in any way the normal resistance to pathogenic bacteria.

4. Its action is rapid and transitory and with it the patient is more likely to secure a better analgesia in individual pain administration than with ether.

5. It is not irritating and not unpleasant to inhale. Also it is less frequently productive of nausea and vomiting than is ether, and when these do occur with nitrous oxid, they subside very shortly. Occasionally its administration is followed by headache which persists from a few minutes to a couple of hours.

Any apparatus that will deliver freely to the patient an adjustable mixture of nitrous oxid with oxygen or air, is satisfactory. The great apparent necessity is to deliver the mixture freely. If the gas must be pulled through a long tube of narrow caliber, the respiratory effort required will undoubtedly interfere with the rapid induction of anesthesia. The apparatus first made for this work had that fault. The apparatus that I am using at the present time is rather a crude improvision and although better than the first, still it does not deliver the gas as freely as is desired.

The gross principal of administration is simple. Enough nitrous oxid must be given to produce the desired state of anesthesia together with enough air or pure oxygen to maintain the respiratory balance of the body tissues. Pure oxygen in obstetrical anesthesia has not been found necessary, as in true prolonged surgical anesthesia. I have used ordinary atmospheric air as the gas diluent entirely, the percentage of air in the mixture being varied from nothing to 50 per cent. as the case requires.

Results in the earlier cases were not so encouraging because in the anxiety to quickly relieve the pain, not enough air was given, leading often to excitement of the patient, with cyanosis and muscular spasm. In fact this muscular spasm was depended on in the majority of cases to bring about the removal of the inhaler. Larger air percentages are now given with a resultant better and quieter anesthesia, the inhaler usually being removed by simple muscular relaxation.

The question of asphyxia of the babe is debatable, but from my experience it would not seem likely. Particularly in the earlier cases the mother would repeatedly during the labor be rendered quite cyanotic, with frequent anoxemic muscular spasm without apparent harm to the babe. The necessity for artificial resuscitation of the infant in nitrous oxid deliveries is not more frequent than with no anesthetic at all. The number of babies born cyanotic is apparently not greater than we find in cases delivered without anesthetic, and I feel sure that the average resuscitation period with nitrous oxid is shorter than with ether anesthesia.

The more satisfactory results have been secured by the self administration method, i. e., with the patient holding the inhaler. The fact that the patient is controlling the inhaler seems to lend confidence, and with this method there is never any danger of overdosage. I have tried repeatedly in office practice by continuously and insistently coaching the patient, to determine how long it is possible for the inhaler to be held in place over the nose. With pure gas the inhaler is removed by the first muscular spasms long before asphyxia is imminent, while with a properly diluted gas mixture it is removed by muscular relaxation with the onset of light anesthesia. I have no hesitancy in stating that this method is absolutely safe. The average woman in labor will react quite encouragingly to this method, taking care of her own anesthesia, with a little coaching, more safely and efficiently by far than the average attendant could do. Any one about the bed can keep the gas bag filled. Where the inhaler is held by an attendant other than a capable anesthetist, the patient is apt to be rendered repeatedly cyanotic, which, while it is not dangerous, is apt to be followed by a disagreeable headache. Not infrequently a patient with hysterical tendencies will fail utterly to properly hold the inhaler, in which case the inhaler as well as the patient must be held by an attendant.

The time of administration depends entirely on the amount of suffering. It may be given with safety over a much longer period than ether. I have two cases recorded in which intermittent anesthesia was maintained over a period of more than six hours, and many cases in the neighborhood of three. The average is from one to two hours. It is not necessary to wait for the beginning of the second stage if the suffering is sufficient to merit anesthesia.

As the head passes over the perineum, continuous anesthesia is permitted, and it is gratifying to note the frequency with which the mother, holding the inhaler, will maintain in herself an anesthetic state over the period of four or five pains necessary for the birth of the babe, which is entirely sufficient to render all pain bearable. She usually lies quiet, and responds to suggestions from the obstetrician to "bear down" or "rest" as he may require.

However, all is not beautiful. Occasionally a patient is found who is absolutely unmanageable with nitrous oxid and it must be abandoned at times entirely. My best results have occurred with the more refined and staple class of patients, as a rule, the poor or only fair results occurring in greater proportion in the lower classes.

I am not in position to compare the frequency of perineal laceration with nitrous oxid and ether, but I am quite sure that laceration is less frequent with nitrous oxid than with no anesthesia at all. All immediate perineal

repair is done with the same method of anesthesia as was employed in that particular case.

The greatest drawback to this anesthetic is the expense of the gas used. I have had a single patient consume ten dollars worth of gas in six hours anesthesia. The cost, of course, depends entirely on the period of administration.

In conclusion, I have but to say that I still believe that nitrous oxid as the obstetrical anesthetic is worth a continuance of the trial.

DISCUSSION

Dr. Louis Burckhardt, Indianapolis: It has been announced that I will discuss Dr. Fair's paper, but I will say in the beginning that while I heartily endorse every word the doctor has said, I will not enter into the details of his paper, which has been thorough as far as it was intended to go.

I brought a few statistics with me which have been gathered from the State Board of Health, covering points which you usually will not find in the statistics given out by the State Board of Health. These seven charts represent the result of obstetrical work in eight representative counties of the state. Marion county is distinctively an industrial county, and then we have a number of agricultural counties pure and simple, and some agricultural and industrial. We have here in the seven counties 5,356 births in 1912, and of these 1 per cent. were attended by midwives; still-born that lived less than ten days, 7.3 per cent.

The first county shows:

Attended by midwives..... 5.3 per cent.
Attended by physicians.... 7.3 per cent.

The next is an industrial population distinctly, with a very large foreign element, and we find the number of those attended by midwives is relatively large:

Delivered by midwives.... 8.3 per cent.
Delivered by physicians....15.1 per cent.

Then we have the next county, mixed population, agricultural and industrial:

Attended by midwives..... 2.0 per cent.
Attended by physicians.... 6.0 per cent.

The next, mixed population:

Attended by midwives.....13.0 per cent.
Attended by physicians.... 7.0 per cent.

The next:

Attended by midwives..... 7.8 per cent.
Attended by physicians.... 5.9 per cent.

The next:

Attended by midwives.....10.0 per cent.
Attended by physicians.... 6.0 per cent.

The next is what we call two poor rural counties—I do not give any names—where we have:

Attended by midwives..... 0.0 per cent.
Still-born ..... 8.4 per cent.

Of course there are two points which we must keep in mind when we take statistical facts like these. First of all—and that has been brought out by Dr. Fair's paper—the midwife who takes a case at $10 will stay with the case, will make it her business to stay with the case; she has nothing else to do. Whereas the doctor who takes the case at $10 will go away and come back—he must look after other patients—and in consequence he has worse results. The second point is that the midwife, when she gets into trouble, calls in the physician, so of course he gets the blame for a good many of the bad results that are really due to the midwife.

However, I tried to eliminate this point by charging the senior student who prepared these charts to verify each case that was recorded by a physician, and to look at the death returns and see if they were made by the same man. We certainly must acknowledge that there is room for improvement.

Permit me now to enter into a discussion of the work of the University School at Indianapolis. We have at our disposal in the University School all the material of the City Dispensary and the City Hospital. We had in Indianapolis in the year 1914—June 1, 1913, to June 1, 1914—5,639 cases of labor, of which 3 per cent. were at the City Hospital and 7.1 per cent. at the City Dispensary, making 10.1 per cent. attended by public charity and in fact controlled by the medical school. During this year we had in the city of Indianapolis 4 per cent. still-born; at the City Hospital, 4.2 per cent.; at the City Dispensary, 3.5 per cent. Of the babies born at the City Hospital, we had 3 per cent. that lived less than one month; at the City Dispensary, 6.5 per cent. You can see the difference on account of the better care that is possible at the City Hospital.

Another point I want to call your attention to is that in the three months ending December 1 we had an increase from 10 per cent. of the charity work to 12 per cent., so that now the City Dispensary and City Hospital take care of 12 per cent. of all births of Indianapolis, and that material amounts to about 600 cases in the City Dispensary, and anyhow 250 at the City Hospital, all used for the instruction of our medical students.

About the work we do at the school I would like to mention one point. We want to instruct our students first, to know what to do, and second, how to do it. That means first to think correctly, and second, to act correctly. As much as possible nowadays the work is carried on as clinical work. To give you an idea, you have here the number of births. Every student that goes out on a dispensary case is under direct control of our dispensary man, Dr. Asher, who has absolute control of every single case, and the students have to

report regularly before birth, during birth, and for at least a week after birth about every and any condition, so if you ask me about Mrs. A or Mrs. B, I can go to the records and tell you how the woman is getting along. This counts, of course, in good results.

Special care has been given to what we call our prenatal work. That means the following up of patients from the first minute we know they are in the family way up to the time when birth actually takes place. We consider it to be more important to avoid trouble than to take care of trouble when a woman is in labor. In the same way we treat our cases after labor; they are visited regularly and a record is kept. We have been helped considerably in our work by the use of the social service and of the Public Health Nurses Association, whose nurses follow up the cases. It is particularly the prenatal care in our work that has increased our work so marvelously. Whereas the dispensary took care of 90 to 100 cases the year before, the moment we instituted this system it has jumped up to almost 600.

About the instruction in the school itself, I want to bring out a few points. Besides the didactic lectures and attendance in the laboratories, we have two forms of instruction. One is discussant, a seminar of an hour once a week where sections on this dispensary work come together to report about their cases. Then the cases are discussed and they keep accurate account of why certain steps have been taken. The second is bedside clinics in obstetrics, which we hold three times a week in the City Hospital. We usually have more than enough material for this work, although sometimes we run as low as three cases in the whole ward, but that is still plenty when you take in with this the care of the baby.

Dr. George F. Beasley: I did not know anything about obstetrics until about sixty years ago, but I have done a little of that work since. I did not hear the first paper, but I got in just in time to hear the doctor reading about nitrous oxid, and he was going on about chloroform. The first thing that came into my head was the old saying, "A fool for luck." I began giving chloroform years ago in obsetrics, and I have kept it up ever since. They claim you get bad results from chloroform, but I never had a case of post-partum hemorrhage where I used chloroform, and I never had any of these troubles that come afterward. This thing of nitrous oxid is all right, but it costs you six dollars, and a good many of us would be out if we furnished nitrous oxid when we can buy chloroform as cheap as we do.

Dr. L. Park Drayer, Fort Wayne: I think Dr. Fair should be supported most heartily in nearly everything he said, and I want to speak of just a few points. One is the advantage of lying-in hospitals over private house work. We cannot plead lack of apparatus and that sort of thing. Dr. Joseph B. DeLee says that in the last fifteen thousand cases in the Chicago Lying-In Hospital they had a record of 0.5 per cent. Now beat that in any hospital on the face of the earth. And if Dr. DeLee can do that in Chicago we certainly ought to be able to do it in our private practice in Lafayette, or Fort Wayne or elsewhere.

Right in that connection let me say something concerning the argument of the gentleman who has just left the floor, in regard to country cases. You do not think of attempting an obstetrical case in a private house in the country without sufficient apparatus and assistance, and if you do take care of a woman without proper apparatus and proper assistance, you are doing something you have no right to do, so do not talk any more about not having assistance and apparatus.

As to the Abderhalden test, I feel that the doctor's statistics do not give us anything positive. If I understood it right, you got twenty-three negative results in parturient women?

Dr. Jane Ketcham: I claimed the negative result is accurate, and the positive result is not always accurate.

Dr. Drayer: It seems to me it is of most value outside of the pregnant state, where you want to differentiate diseased conditions other than the normal pregnant condition, there it seems to me the Abderhalden test should be used extensively in confirmation of the physical findings.

Third and last, relative to anesthesia. I believe we have a right to bring these women through childbirth free from pain. And women are finding that out, and they believe they should be freed from pain, and we certainly are behind the times a good many years if we expect to practice obstetrics with the same amount of pain as in the days of our fathers and grandfathers. The doctor has come up here with this admirable apparatus, absolutely free from danger, and it is our business to look into it. If we do not, what is the use of coming here. Chloroform should be thrown from every obstetric bag, it makes no difference what your experience has been.

Dr. Charles R. Bush, Indianapolis: On relation to Dr. Fair's paper, we feel in Indianapolis that "Every cloud has a silver lining," for people are beginning to ask for hospital accommodations, even among the poorer classes. Those who barely can afford a nurse for a week are finding out that they can go to the hospital almost as cheaply as they can be taken care of at home.

Of course the work in the maternity hospitals is as near ideal as you can have it, and as far as my observations have gone ether has been the anesthesia of choice there. It is easily given, and we usually have a good at-

tendant to give it. In the home I want to say a word for chloroform. I do not know what has been the experience of any of you, but you do not always have electric lights to work by, and where you have somebody holding an oil lamp near you I think it is better and safer to use chloroform rather than ether, for I have known of two explosions with rather dire results from administering ether in proximity to flame.

A word in regard to the use of the binder. Among the younger men with whom I meet in the city the binder is falling into disuse, and also the old practice of keeping patients on their back after labor. We allow them to move around some. They are more comfortable and convalesce more rapidly.

Dr. B. W. Rhamy, Fort Wayne: I want to say a word about the Abderhalden test. All of us are familiar with the antitoxins, and we know that the enzymes are a ferment in the blood to dispose of any foreign proteins which gain entrance, and we are reasonably certain that these digestive enzymes are specific, that is to say, there is a specific enzyme ferment for each particular protein. As an example of this we know that if you inject one animal with the blood-cells of another animal, that the injected animal's blood will develop an enzyme to digest the foreign blood-cells. In this connection the application of this principle to the diagnosis of pregnancy by the Abderhalden test is of much interest. His theory assumes that to all intents and purposes the fetus and placenta are foreign bodies to the mother and on account of the intimate relationship between the mother's blood and the placental tissues, some of the placental cells are bound to be washed into the mother's blood-stream. It is natural then to assume that the mother's blood becomes a ferment or enzyme which will digest these placental cells. Whether or not these placental enzymes are absolutely specific is a question that is not entirely settled. There has been a great deal of work done on this test in Germany, and their writers are very much in favor of it. In this country there has not nearly so much work been done, and the reports are conflicting. I believe that the greatest objection to this test is that although the test seems very simple, yet in actual practice it requires such an infinite amount of painstaking care and attention to detail that only in the hands of a very experienced laboratory worker is the test at all reliable.

In regard to collecting the blood for this test, one of the main points is first, that everything in connection with the procedure should be aseptic. The receptacle should be sterilized and chemically clean; the blood that is taken should be allowed to stand and the serum to separate. If the blood is shaken in the receptacle some of the hemoglobin will be dissolved and render it worthless. On the part of the laboratory worker, when the blood is brought to the laboratory, if when it is centrifuged it is not centrifuged sufficiently, some of the blood-cells may remain in the serum and spoil the test. Everything used in connection with the test must be absolutely sterile and chemically clean. If the proper attention is paid to details, I believe that this test is well worthy of recommendation for use in general practice. Of course it is not necessary in the ordinary case of pregnancy, but in cases of doubt, where there is a question of surgical necessity, I believe the physicians should make use of this test as an aid to diagnosis, although we should not rely on it absolutely.

Dr. W. D. Hoskins, Indianapolis: It has been my privilege and pleasure to have had some little experience in the use of nitrous oxid in obstetrical anesthesia. So far my impressions have been favorable. I have seen nothing unfavorable that could be in any way associated with the use of the gas; on the other hand, there have been a few things that are very definitely in its favor. In the first place, the relief from pain is certainly marvelous. You are all familiar with the hours of intense pain that go dragging along during the stage of dilatation, when, under the old regimen, we were taught it was unsafe to give ether or chloroform, because we did not know but what that might be kept up from five to ten hours. But under the gas anesthesia it has been my observation that it is safe to begin the gas when the woman began to make any bitter complaint of pain, even apparently early in the dilating stage. And my experience has been that it acts as an accelerant to labor without any disastrous results. Whether it does this by minimizing the inhibitory action of fear, I am not sure, but certainly the results are most satisfactory.

Dr. Arthur Guedel (closing): I want to thank Dr. Drayer. I am not offering this to you fellows who do not want it. You may go ahead and use chloroform all you want to, but you cannot use it in my family or on my people. There are patients on whom you cannot use nitrous oxid, and you will have to use ether, and there are others that you cannot anesthetize at all, and they just have to bear it without anesthesia. We know chloroform is dangerous, we know ether is dangerous, but I do not know a single harmful effect of nitrous oxid except asphyxia—and this is impossible with the self administration method. Chloroform has had its day; ether is on its way. If nitrous oxid is to be the next anesthetic, let it come. If someone has something else better, bring it on.

Dr. Kemper, Muncie: Can you give me a well-authenticated case where a woman died in labor as a result of the use of chloroform?

Dr. Guedel: One, I can, without any doubt, and six or eight cases where the women did not get well and died within a week. These cases were cases where chloroform had been given from two to four hours. I believe it is absolutely safe to give a little chloroform when the head passes over the perineum.

Dr. McBride: I move that we hear Dr. Burckhardt on the subject of anesthesia.

Dr. Louis Burckhardt: As to chloroform, I use it a little, not as a deep anesthesia, but 8 or 10 drops at a time.

Now about the use of scopolamin, or what is practically the same, hyoscin, in obstetrics. It is not to be used nor considered as an anesthetic; that is not what you want of that remedy, and that is where the mistake comes in. What hyoscin or scopolamin produces is forgetfulness of pain—the patient does not remember that she ever has had a pain before, and it takes away fear, and it is because of that that the "twilight sleep" is considered so favorably by the patient. She wakes up, she has her baby, and has never known pain.

Some object to the use of scopolamin because of the trouble in resuscitating the baby, but you give your patient ¼ grain of morphin, then wait a half hour, and then give 1/200 grain of hyoscin; then wait a while, maybe an hour or two. Five hours after the morphin, if it is needed I give the second dose. So far I have never given more than two doses, and the results have been good. I have now in mind three cases of 40-year-old women, two of them primipara and one a multipara. In one case the labor was over in six hours, and that was the primipara. Two hours after the membranes broke the baby was born. But we must be judicious in the use of that remedy. I know some men have had excellent results. I leave it open for my patients, telling them that we can give it with perfect safety. I use hyoscin in preference to scopolamin. Chemically they are the same.

Dr. Jane Ketcham (closing): These twenty-three cases that were reported were suspected pregnancies, one very early, and we did not find a positive reaction. They were negative cases, and they were accurate controls.

As far as the technic of the test is concerned, you have to be absolutely accurate, and have everything absolutely clean. I always wear rubber gloves and never touch anything from the beginning until the test is finished. The advantage of the placental test is that it is exactly the same as other tests, only when you know how to make the pregnancy test you can check your result. You can make the same test in different conditions if you have the antigen you want. I have a case of a tubercular gland that I will work on as soon as I get back home. I have some tubercular gland antigen, and I hope to get some results in that case. The girl has no shadow of a diagnosis of tuberculosis, but I think there is a tubercular gland condition. It is more interesting than the pregnancy test, as it has vast possibilities.

SARCOMA OF THE OVARY*

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This paper is based upon a comprehensive, but not an exhaustive, study of the literature of the subject, including a study of 26 cases which I found reported in satisfactory detail, together with three cases occurring in the author's practice, making 29 in all. My cases reported in brief are as follows:

Case 1.—Aged 38. The present attack, consisting of abdominal pain, constipation, and bloating, came on five weeks before consulting me. Her menses, which had been regular, were overdue three weeks. She first noticed the tumor two weeks ago. It was the size of a seven-months' pregnancy, nodular, and cystic. At operation a scar and a nodule were found on the colon. The abdomen was closed without removal of the growth. The patient was discharged one month later, unimproved. I could get no later word from her. No microscopic examination was made of the growth.

Case 2.—The patient was aged 15. She had known of the tumor for one year, and had complained of pain in the right chest. She was very much emaciated, and the abdomen was larger than a pregnancy at term. She had never menstruated. I could not make out the cervix or os by a vaginal examination. There was some ascites. The diagnosis was a sarcomatous abdominal tumor, probably ovarian. At operation many adhesions were encountered. The bulk of the tumor was reduced by opening the larger cysts. It was not until after the mass was removed that it was found that it included the adnexa and the uterus, and that the sarcoma involved both ovaries. The solid portion of the tumor weighed nine pounds.

The patient made a satisfactory recovery, and was in perfect health six months later with no signs of recurrence.

Microscopic diagnosis: large round-celled sarcoma.

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Case 3.—Patient aged 18, single. Her general health was good. She had noticed an abdominal growth for a few weeks before consulting me. There was no pain or other symptoms. A diagnosis of tumor of the left ovary was made. At operation the tumor was found to be solid, the size of an adult's head, and free from adhesions. On microscopic examination the tumor was found to be a fibrosarcoma. It is now twenty years since the operation, and the patient is well. Since the operation, the patient has married, and is now the mother of several children.

There is good reason for believing that many sarcomas of the ovary have been overlooked in the past because of incomplete microscopic study, and that, for the same reason, many tumors of the ovary were classed as sarcoma which in reality were not sarcomas at all. On no other ground can we account for the opinion of Gibson,[1] that sarcomas of the ovary are of uncertain malignancy, or for the opinion of Pfannensteil, quoted by Gibson, that removal of ovarian sarcomas is followed by 50 per cent. of cures. According to Gibson (loc. cit.), ovarian sarcoma occurs once in a hundred cases of ovarian tumor. Schroeder (quoted by Adami and Nicholls) says sarcomata constitute 1.5 per cent. of all ovarian tumors.

Wermuth[2] quotes Heine's table of 827 tumors of the ovary, 3.87 per cent. of which were sarcoma.

Hartz[3] quotes Scharlieb as reporting only 4 sarcomata in 25 cases of malignant ovarian growths; and Norris as having found no sarcoma in 63 cases of ovarian growths, 10 of which were malignant.

According to Kelly and Noble, 50 per cent. of ovarian tumors occurring in patients under five years are sarcoma.

Sutton[4] says that the majority of solid tumors of the ovary are sarcomas.

W. Lippert[5] found 16 sarcomata in 638 tumors of the ovary (2.51 per cent.).

Lockhardt,[6] in 65 cases of ovarian tumor, found 14 malignant, 3 sarcomata, and 11 carcinomata.

In 49 consecutive cases of ovarian tumor in my own practice, I found 2 sarcomata (4+ per cent.). Case 3 is not included in this list, because it occurred 20 years ago, and it was impossible to make a consecutive list extending back very far. In 2,995 cases of ovarian tumor collected from the literature and embodying the work of thirteen observers, I found the incidence of sarcoma to be 5.43 per cent. Sutton[7] collected from current literature 100 cases of ovaritomy in girls under fifteen years of age, of which 21 were sarcomata. Sutton thinks, however, that this is far short of the real proportion of sarcomata because of the many cases in which no operation is done and the character of the tumors discovered at post-mortem. Averaging the percentages obtained from sixteen observers, and covering over 3,000 cases of ovarian tumors, we find the percentage of sarcoma to all other tumors to be 5.08.

In view of the foregoing, and taking into consideration a number of statements of authors and a number of tables concerning malignant tumors of the ovary, to which we do not deem it wise to give definite and detailed reference here, the conclusion seems warranted that about 20 per cent. of all ovarian tumors are malignant, and about 5 per cent. of all ovarian tumors are sarcomata.

Contrary to the rule, sarcomata of the ovary frequently involve both organs. The only form of sarcoma which can be compared with ovarian sarcoma in this respect is glioma of the retina.

In the 29 cases collected by me the trouble was bilateral in four (13.78 per cent.). In Wermuth's collection of 197 cases, both ovaries were involved in 26.9 per cent. Littert found 2 bilateral sarcomas in 16 cases (12.50 per cent.).

Averaging these percentages we concluded that sarcoma of the ovary is bilateral in about 17 per cent. of all cases. We are therefore warranted in concluding that Sutton was nearly right when he said that both ovaries were involved in "the proportion of about 20 per cent. of the cases."

Sarcoma of the ovary is especially likely to occur in the two extremes of life, although it may occur at any age. Doran[4] reports a case in a fetus of 7 months, and Hoffman[7] reports an operation on a child of 33 months for sarcoma of the ovary. It would seem that all paired organs are particularly prone to sarcoma early in life. In my table the oldest patient was 62 and the youngest 10 years of age. The average was 35 years. Three out of 28 cases occurred before the sixteenth year, 8 in the fifth decade or later, and 17 between the ages of 15 and 50.

1. Annals of Surgery, 1900, xxi, 736.
2. Zeitschrift für Geb. u. Gynecol., 1910, lxvi, 123.
3. Am. Jour. Obs. and Dis. of Women, lxvi, 1912, No. 4, p. 544.
4. Surgical Dis. of Ovaries and Fallopian Tubes, 1891, p. 75.
5. Archives f. Gynecologie, 1904-5, lxxiv, 389.
6. Journal of Obs. and Gynecol. of British Empire, August, 1909.
7. Tumours: Innocent and Malignant, Ed. 4, 1907, p. 514.

Sarcomata of the ovary are usually of rapid growth. Doran's case, already referred to, was that of a seven months' fetus, in which the tumor was the size of an orange. In many cases the tumor reaches the size of a seven months' pregnancy within 6 weeks. In Steinharter's[8] case the belly was found filled with new growths within three weeks, and in two cases in my table the tumor reached to or nearly to the umbilicus in a month. Not infrequently cases are reported wherein tumors have been known to exist for months without increase in size, when suddenly they take on rapid growth. This sort of history indicates a tumor primarily benign which has undergone a malignant change.

On palpation the majority of ovarian sarcomata convey to the examining hand the sense of solidity and firmness, rather than a sense of elasticity and fluctuation, such as is conveyed in ordinary ovarian or parovarian cysts.

In 27 cases in my table in which this point is noted the tumor was reported "hard" or "solid" in 13, and cystic in 4, and the remaining 10 cases were designated as "pultaceous," "brain-like," "firm and elastic," or "cystic and solid."

Concerning the complications met with in sarcoma of the ovary, it may be said that while there are none which are peculiar to this class of tumors, they are, on the other hand, subject to the same complications as are other tumors of the ovary. Ascites is the rule in both sarcoma and carcinoma, and does not occur frequently in benign tumors of the ovary. The ascites is present whether the malignancy involves the peritoneum or not. It may be said then that ascites in connection with ovarian tumor indicates malignancy, but not the character of the malignancy, and that the presence of ascites does not mean that the disease involves the peritoneum. Two cases in my list were complicated by pregnancy, one reported by Bircher[9] came to successful operation in the fourth month, and in one, reported by Maskus[10] cesarean section was done for eclampsia. In the latter case there were bilateral melanosarcoma of the ovaries and carcinoma of the liver. In two cases there was a twist of the pedicle.

Winternitz[11] reports a case operated on for brain tumor, which came to autopsy, when it was found that the brain tumor was secondary to a melanosarcoma of the ovary.

Lippert, whose paper has already been referred to, found, in 168 cases, adhesions in 7, ascites in 11, sarcoma of uterus in 1, parovarian cyst in 1, fibromyoma of uterus in 1, and metastasis in 4.

In this connection it should be remembered, as pointed out by Sutton, that in dermoids of the ovary masses of tissue are often found which can not be distinguished from sarcomatous tissue, and that the removal of such dermoids is sometimes followed by pelvic sarcomata. Pucher[12] reports a case of giant-celled sarcoma developing in the wall of an ovarian cyst.

The co-existence of sarcoma and carcinoma in the ovary is rare. Cullen[13] reported one case two years ago, and says he could find no other case reported at that time. However, in an editorial note, in the *Journal* of A. M. A., Vol. LII, 1909, Apr. 24, p. 1335, Forssner is credited with adding two new cases of carcinosarcoma of the ovaries to the small number previously reported, and with the statement that in all only eight or ten such cases had been reported at that time. Evidently, Cullen was not acquainted with Forssner's report when he made his. One would not expect carcinosarcoma of the ovary to be so rare, in view of the results of the experiments of Bashford and Haaland,[14] who succeeded, by repeated transplantations of adenocarcinoma, in producing pure sarcoma; and in view of the fact that dermoids are potentially both cancer and sarcoma. LeConte,[15] in discussing Gibbon's case, says he never saw a pure carcinoma of the ovary; but it does not appear in his remarks whether he refers to a combination of carcinoma with sarcoma. It is rather significant in this connection also that in the 29 cases tabulated for this paper there was found coexisting cancer in other organs in two, one reported by Markus, referred to above, of cancer of the liver, and one of cancer of the pylorus, reported by Bushnell and Kewawalla.[16]

All varieties of sarcoma have been found in the ovaries. According to Winternitz, whose paper has been referred to above, his was the fourth case of primary melanosarcoma recorded. In my search I found in 23 cases in which the character of the tumor is given, 2 melanosarcomas, 8 round-celled, 10 spindle-

8. Lancet-Clinic, July 26, 1912, xc, No. 4, 84.
9. Centralblatt f. Gynecologie, Leipsic, xxxi, No. 44.
10. Archiv. f. Gynäkologie, 1910, xcii, 659.
11. Bull. Johns Hopkins Hosp., October, 1909, No. 223, p. 314.
12. Monatsch. f. Geb. p. Gynäkol., Berlin, June, xxix, No. 6.
13. Bull. Johns Hopkins Hosp., October, 1911, No. 248, p. 367.
14. Imp. Cancer Research Fund, 3d Sci. Rep., London, 1908, p. 248.
15. Annals of Surgery, 1905, xli, 619.
16. International Clinics, 1908, Series 18, iv, 169.

celled or fibrosarcomas, and three endo- or mesotheliomas.

The age of Winternitz's patient with melanosarcoma was 26 years. The age in the Markus case is not given.

The average age for the round-celled cases in my table is a little less than 26 years, for the spindle-celled, a little more than 41 years, and for the endotheliomata 40 years. This age incidence, as it comes out in this table, is extremely interesting and suggestive, though, of course, by no means conclusive, and is corroborative of the consensus of opinion that round-celled sarcomata are more common in the young, and that spindle-celled sarcomata are more common in adults. The spindle-celled variety is the most frequent.

Sutton holds that malignant tumors in the ovaries of children are histologically distinct from the common forms of cancer and sarcoma, and should be grouped by themselves. He suggests that they be called oöphoromata.

The difficulty of correctly classifying malignant tumors of the ovary is very great. Steinharter (vide supra) accounts for this on the ground of the inherent metaplastic nature of the mesothelial cells. These cells, he says, are the least stable of the thelia. Adami,[17] speaking of endothelioma says, "If of slow growth, such a tumor may present all the characteristics of cancer, and, if actively vegetative, be indistinguishable from sarcoma. Moreover, an intermediate type is frequently met with in which one part of the growth shows the cancerous type of structure, and the other part has taken on a hyaline type." In speaking of Ribbert's expressed doubt of the existence of tumors arising from the endothelium, Adami[18] also says, "It should be remarked in this connection that the so-called endotheliomas may in some cases arise from "rests" derived from the mesothelial lining of the cœlom, a possibility that does not seem to have suggested itself to the systematic writers."

The diagnosis of ovarian sarcoma is seldom made, save at operation or post-mortem.

Of the 29 cases collected for this paper, the diagnosis of "probable sarcoma" was made in 1,[19] of "solid ovarian tumor, probably fibroid or sarcoma" in 1,[20] of sarcomatous abdominal tumor origin probably in ovary in 1 (Case 2 herewith reported).

It would seem that the diagnosis might be oftener made if each case were carefully studied in the light of the facts now before us. Ovarian tumors occurring in girls under fifteen are quite likely to be sarcomata; and, if bilateral, it is highly probably that they are. Bilateral solid ovarian tumors in children are usually sarcomata. Great rapidity of growth should also lead one to suspect sarcoma, as should also rapid growth of a tumor that had been stationary for a long time.

Pain was a prominent symptom in ten of the twenty-nine cases collected by me, and would therefore seem to be a symptom of some diagnostic value. Either amenorrhea, menorrhagia or metrorrhagia is much more common in sarcoma than in benign tumors of the ovary. One patient, aged 30 years, had amenorrhea for 16 years, and then began to flow continuously. One patient, aged 15, had never menstruated. Two patients had a bloody vaginal discharge, which came on years after the menopause.

Any process which destroys completely the ovarian tissue will, of course, cause amenorrhea. A malignant tumor is more likely to destroy the tissue than a benign one; moreover, sarcomata of the ovary are peculiarly apt to be bilateral and to occur in the young, hence one would expect to find amenorrhea occurring with sarcoma more often than with any other form of ovarian tumor. One of my patients was 15 years old, and had never menstruated. This patient's menstrual suppression may have been due to other causes; but, inasmuch as she was not immature for her age and had what seemed to be a complete destruction of both ovaries from the tumor growth, I am inclined to attribute the amenorrhea to the tumors. Another patient had passed her regular period three weeks when she consulted me, and had not menstruated when heard from a month later.

Pfannensteil, quoted in Veit's "Handbuch der Gynäkologie," says that amenorrhea with ovarian tumors is rare, but is more likely to occur in connection with carcinomata, sarcomata, and papillary cystadenomata when they are bilateral. All in all, he says amenorrhea occurs in about 2 or 3 per cent. of ovarian tumors. Wiener[21] reports a case of amenorrhea with bilateral dermoids. As Wiener does not say anything about a microscopic study of the specimens from his patient, and as the case was reported only seven months after the operation and in view of the fact, stated above, that many dermoids contain tissue that cannot be differentiated from sarcoma tissue and that

17. Quoted from Steinharter's article. (See No. 8, above.)
18. Adami and Nicholls Systemic Pathology, ii, 861.
19. Medical Record (Coe and Coley), March 16, 1907.
20. Monatschrift f. Geb. p. Gynäkol., 1908, xxvii, 102.
21. American Jour. Obs. and Dis. of Women and Children, October, 1913, p. 683.

the removal of such dermoids is sometimes followed by recurrent growth in the pelvis, we are warranted in entertaining the suspicion that a careful search would have shown sarcoma tissue in the specimens removed from his case.

Wermuth says that sarcoma in the young may cause premature signs of puberty. I did not find any other author who confirmed this statement. That sarcoma of the ovary might cause a premature menstrual flow seems quite probable; but that it would cause developmental signs of puberty seems to be problematical.

Unless relieved by treatment, sarcoma of the ovary always terminates fatally. The prognosis is less favorable in children than in adults. Death occurs from involvement of other organs by metastasis and by implantation.

The mortality of the operation per se is also much higher in children than in adults. Seven out of 21 in Sutton's collection of cases under fifteen years of age died from the operation, and 4 of the 14 that recovered died from recurrence within a year. The prognosis is best in fibrosarcoma; and, as in malignant tumors generally, the prognosis in all the forms depends, in large degree, upon the time of recognition of the trouble and the time of operation. Jones[22] of Providence reports a successful operation for fibrosarcoma of the ovary in a woman fifty years old, who consulted him for vaginal hemorrhage; and he remarks that the prognosis is "good for several years in this type of case." In my table there were 3 operative deaths in 28 cases (about 10 per cent.), excluding Winternitz's case which was operated for brain tumor; and a case reported by Markus, who died of puerperal eclampsia for which cesarean section was done. Lippert's mortality was 18.75 per cent. In four of Lippert's cases, however, metastasis was found when the operation was done. Considering the age, there seems to be no reason why the operative mortality in sarcomatous tumors of the ovary should be greater than that for benign tumors, provided there be no implication of other organs by the disease. It is well to emphasize the fact that, in those cases in which the operative mortality is high, it is so because of implication of other organs by the growth. either from implantation or metastasis, and that even without operation these patients could live but a short time.

In my table there are three cases remaining well for three years or more. (One for 3, one for 4 and one for 20 years.) This would indicate a permanent cure from operation in about 10 per cent. of all operated cases.

Operation is advisable even in those cases in which the chances for success seem almost nil. In one of my cases (Case 2) the tumor was nearly as large as was the patient after removal of the tumor. The patient was extremely emaciated, and otherwise seemed an almost hopeless risk, and yet she recovered promptly from the operation, and is now (6 months later) in perfect health.

Coe and Coley[23] report a case which at first was considered inoperable, but after giving toxins it was operated on successfully, and the patient lived for two years, dying from metastasis.

Seeligman[24] reports the successful treatment of a case of recurrent sarcoma of the ovary with metastasis in the spinal column by arsacetin intravenously and Roentgen rays. Bad effects are avoided by using small doses of arsacetin, and testing the color-sense every eight or ten days. Any disease of the eyes contra-indicates the use of the drug.

In conclusion, we may say that early operation in sarcoma of the ovary offers a good chance for permanent cure; that late operation cures rarely, but usually gives relief and prolongs life; and that some seemingly hopeless cases have been benefited and cured, for some months at least, by operation and the use of Coley's fluid, and by the combined use of the Roentgen rays and arsacetin.

22. American Jour. Obs. and Dis. of Women and Children, November, 1913, p. 906.

23. Medical Record, March 16, 1907.

24. Deutsche Gesellsch. f. Gynäkol., Halle, 1913, May. Abs. in Surg., Gynec. and Obs., November, 1913, xvii, No. 5, p. 539.

MODERN METHODS IN DIAGNOSIS AND TREATMENT OF CEREBROSPINAL MENINGITIS *

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There are indications that Indiana is threatened with an epidemic of cerebrospinal meningitis. In the past five or ten years the disease has been all around us. In Boston and New York, in the Northwest, and more recently in Texas, there have been extensive and serious epidemics. Between January 1 and September 1 there have been sixty-seven cases in

* Read before the Indiana State Medical Association at Lafayette, Sept. 24, 1914.

Indiana; thirty-three of which were in Indianapolis. The serious nature of the disease and some recent developments in diagnosis and treatment make it worth reviewing.

As is usual in the early part of an epidemic, the mortality has been high. Of the 19 cases which I saw personally, 10 were fatal, a mortality of 52 per cent. Of the Indianapolis group of 33 cases, 19 were fatal, or 57.6 per cent. Of the 67 cases in Indiana, 55 died, a mortality of 82 per cent. This epidemic is characterized by the relatively large number of adults attacked; in my series about 50 per cent. were children under 16 years. In most epidemics 80 per cent. of the cases are under 16 years (67 per cent. under 10 years). Age is a variable factor depending on where the infection starts.

Etiology.—The disease is due to a specific organism, the diplococcus intracellularis meningitidis, more briefly known as the meningococcus. The organism loses its vitality in from two to five days at room temperature. It is rendered inactive by the use of fairly mild antiseptic solutions.

The disease has a most striking seasonal variation, 61 per cent., or almost two-thirds of all cases occur in March, April and May.

Dissemination.—In its distribution the disease has always been noted for its eccentricities. Sporadic cases appear at irregular times and places without any spread of the infection. At other times the contagious nature of the malady is most striking and a widespread and fatal epidemic develops. It is difficult to explain this solely on the basis of variations of virulence, for often the sporadic cases are severe and fatal.

Carriers.—Not until 1901, when Albrecht and Gihon discovered that the disease could be transmitted by carriers were the peculiarities in its distribution explained. It has been estimated that there are ten to twenty times as many carriers as there are cases of the disease.

Meningococci are found in the throat of 93.8 per cent. of all cases. In only 6 per cent. was there a history of contact with the disease. In only 5 per cent. were there other cases in the same family.

Another interesting and significant feature is that the meningococcus disappears rather rapidly from the throat of the patient, 66 per cent. are clear at the end of five days and only 10 per cent. of patients harbor the organism after two weeks. On the other hand, the organism may be found in the nose and throat of healthy carriers as long as three weeks to six months.

The number of carriers varies directly with the severity of the epidemic and the closeness of contact. While there is seldom more than one case in a family, research has shown that from one-third to one-half of the parents of patients are carriers, while about one-third of the brothers and sisters in the family harbor the organism. Social status, cleanliness and general sanitation are definite factors. In poor families 31.3 per cent. of those associated with the disease are found to be carriers. In comfortable surroundings this is reduced to 15.3 per cent. It speaks well for professional care and cleanliness that physicians, nurses and hospital attendants rarely acquire or spread the disease.

These figures suggest that the average individual has what has been called by Sophian a high degree of receptivity and a low degree of susceptibility. That is to say, many people acquire and harbor the meningococcus, but relatively few contract meningitis. In Litterer's series only 2 per cent. of the carriers developed the disease.

Epidemics.—What then gives rise to the epidemic? Is it increased susceptibility of the individual or increased virulence of the organism? Some argue that the changeable climate of early spring, following our rigorous winters, finds the general health and resistance below par and so produces an increased susceptibility to disease. To render this theory plausible it should apply to all diseases, which it evidently will not do. It is notable that the disease when epidemic affects the most robust almost as frequently as the debilitated. It seems more reasonable to assume that the organism at times acquires peculiar virulence sufficient to overcome our ordinary immunity. In other words, it seems to me more plausible to assume that the variable factor is in the virulence of the organism rather than susceptibility of the community.

Invasion.—As to the route of invasion, there is yet no unanimity of opinion. It has been thought that the infection might be by nerve sheaths, lymphatics, cribriform plate or sinuses. The trend of opinion now is that the infection is by the blood-stream. In most but not all cases there is clinical evidence of a bacteriemia a day or two before the specific or localized characteristics of the disease appear.

Pathology.—There is little new in the pathology. The tendency of the cerebrospinal

fluid early to become purulent is characteristic, but this is not distinctive, as this same tendency is observed in several other infections. The infection seems to be primarily localized in the cerebral vessels. The meninges of the cord are found involved early, which suggests the probability of a blood dissemination.

A very definite factor in the pathology of meningitis is the increased secretion of cerebrospinal fluid and resulting hypertension. A moment's contemplation will make clear that the clinical manifestations of meningitis are largely those of pressure.

Clinical Types.—A variety of clinical types are recognized in the course of an epidemic: (1) the ordinary—acute and chronic; (2) malignant—fulminating and hyperacute; (3) mild; (4) abortive; (5) intermittent; (6) posterior basic. While a knowledge of the occurrence of each of these is desirable, for practical purposes and for brevity, we will limit our consideration to the ordinary acute type.

Onset.—In this the onset is usually but not always abrupt. The patient or the mother can usually point to the hour of onset. The early symptoms are those of any infectious process; viz., headache, fever, vomiting, general aching of back and limbs.

Symptoms.—After a variable interval of from a few hours to a few days the distinctive signs of meningeal infection appear. The headache persists and increases in severity. Stiffness and rigidity of the neck is an early and valuable sign. Brudzinski's neck and leg and contra-lateral reflex are valuable signs in children. That is, when the neck is drawn forward, the legs are involuntarily flexed. If with the patient on the back, one leg and thigh is flexed on the abdomen, the other leg is instinctively flexed also.

Kernig's sign is very helpful if present. It appears later and is less constant than the Brudrinski signs just described, and is therefore less valuable. Kernig's sign is valuable when present, but is variable, as it may be present one day and absent the next. Lyons states that Kernig's sign was present at the first examination in 90 per cent. of his adult cases, and at some time during the disease in 100 per cent. It is seldom present in children under 2 years.

Retraction of the head and opisthotonus are valuable signs but they occur late and one should not wait for them to make a diagnosis.

Delirium and coma are important and valuable symptoms when present. They may be present early or not until late. They are good for corroboration, but a diagnosis can be, indeed should be, made before they appear.

Cerebrospinal Fluid.—A distinct and marked feature of meningococcus infection is its tendency to produce early a turbid cerebrospinal fluid. Occasionally in a virulent case where the disease is suspected and a puncture made early, say the first twenty-four or thirty-six hours, the fluid may fail to show this turbidity. Ordinarily, however, it is one of our most reliable signs and will establish the diagnosis in 95 per cent. of cases.

A number of other organisms are capable of producing a turbid or purulent spinal fluid, notably the pneumococcus and the streptococcus mucosus and the influenza bacillus. Compared with the meningococcus these are relatively rare causes of meningitis, particularly primary meningitis. Hence clinical evidences of meningitis without other foci of infection with a turbid or purulent spinal fluid is sufficient evidence for assuming a meningococcus infection and treating accordingly until a microscopical examination can be secured.

Diagnosis.—Agglutination tests have not proven reliable. Forty per cent. of the strains studied are said to be inagglutinable. Complement-fixation tests have shown markedly different reaction by different strains. The opinion is expressed that each epidemic is probably caused by one particular strain.

The above statements as to the number of different strains of the organism and the markedly different reaction of these to complement suggests something of the difficulty encountered in attempting to make a serum that will be clinically effective in all epidemics.

The most frequent conditions confused with cerebrospinal meningitis are the acute toxemias, usually due to gastro-intestinal disturbance, or the onset of acute infectious diseases, such as scarlet fever or pneumonia. Here an early differentiation is sometimes difficult and a lumbar puncture will often be necessary to decide. Acute poliomyelitis may be difficult to distinguish.

Tubercular meningitis does not usually have the abrupt onset of meningococcus infection, and the pain is less severe, rigidity less marked and the fever not so high. The child is apathetic rather than delirious or comatose. Meningococcus infection is often suspected at the first visit, but the physician may treat tubercular meningitis for a week or more before it dawns on him that the trouble is in the brain.

Here, again, lumbar puncture will often be called on to cast the deciding vote.

Prognosis.—The mortality in meningococcus meningitis has been appalling. In the New York epidemic, the largest on record, and which occurred before the advent of serum therapy, the death-rate was 75 per cent. It was seldom much less and often higher. In sporadic cases the mortality is less than in epidemics since the very fact of an epidemic implies a virulent organism. The early cases in an epidemic are more fatal than the late ones, the organism apparently losing virulence, or as the laity puts it, "the disease wears itself out."

Age is an important factor. Under 3 years and over 30 the mortality is perceptibly higher. Since the elaboration by Flexner of a specific serum the mortality has been distinctly lowered. In the Texas epidemic Steiner from 2,280 cases computes the mortality in those treated without serum at 77 per cent.; with serum treatment 37 per cent. These figures are probably subject to the correction mentioned, viz., that the disease tends to be less virulent toward the close of an epidemic. It is assumed that a larger percentage received serum toward the close than at the beginning of the epidemic.

The distressing sequelae, physical and mental defects, which were formerly so common, are seldom observed after serum treatment. The recovery, if it occurs at all, is complete. Since the advent of serum therapy the most important factor influencing mortality is an early diagnosis. Sophian's statistics show that in cases diagnosed and serum treatment begun from the first to the third day of illness the mortality was from 10 to 25 per cent.; from the fourth to the seventh day, 15 to 33 per cent.; later than the seventh day, 22 to 42 per cent.

Treatment.—The production of a specific anti-meningococcic serum by Flexner and his co-workers is one of the triumphs of modern scientific medicine. Like all delicate instruments, in order to secure the best results the serum must be used intelligently. If it is administered without some knowledge of the nature and habit of the organism it combats, and of the nature and action of the disease process it attempts to cure, its users will be foredoomed to disappointment and failure.

The meningococcus does not, while living, secrete in any considerable quantity a soluble toxin. The organism produces its pathogenic effects by direct and local action on the tissues. Any remedy (serum), therefore, which attempts to act against such an organism must be much more than a simple antitoxin. It must combine in one serum bacteriolytic (bactericidal), bacteriotropic (opsonic) and detoxicating (antitoxic) action (Sophian).

It is very evident then that with a serum whose action is so varied and complex it will not suffice merely to inject a little of the serum anywhere into the tissues, or even into the blood-stream, go our way and expect results. In order to secure efficient action the serum must be brought into immediate contact with the infecting organisms and infected tissues, and in the greatest possible concentration. In injecting remedial agents of this complexity into the cerebrospinal canal, we are in relatively new territory. Of the variations in pressure and osmotic action of the cerebrospinal fluid in health and diseases we know little enough. Recent accidents in salvarsan therapy in this region as well as occasional accidents in administering anti-meningitis serum, should teach us that some discretion is needed in manipulations in this vital and sensitive area of the central nervous system. We do know that the serum will not pass from the blood into the cerebrospinal fluid, but that it does readily pass from the cerebrospinal fluid into the blood, and that within twenty-four hours practically all serum has disappeared from the spinal fluid.

Frazier has recently reported experiments which support the theory that the cerebrospinal fluid is a secretion from the cells of the choroid plexus, or, as he calls it, the choroid gland. He further states that the secretion of cerebrospinal fluid by the choroid gland is directly inhibited by extract of the thyroid gland irrespective of its action on the general blood-pressure. So far as I am aware this has not been tested or verified clinically.

The preliminary step in the serum treatment is the withdrawal of some of the cerebrospinal fluid by means of a lumbar puncture. This operation has been so long known and so often decribed that I shall assume it is familiar to all. As to the amount of cerebrospinal fluid to be withdrawn there is a marked difference of opinion. Our first practice was to withdraw only as much fluid as serum to be injected. I have always believed that it was better where the fluid was infected and purulent to draw off all I could get. Further knowledge of the action of serum has confirmed my belief and practice in this. I have never had any bad results that I could attribute to this practice. The only effect that I have had has been some cases complain of a severe headache, but I

am yet to be convinced that this is dependent on or related to the amount of fluid withdrawn. If the action of the serum is bactericidal rather than antitoxic certainly the advantages of free drainage are self evident. There is a growing belief that the deaths in meningitis are not so much due to toxic action as to prolonged and excessive pressure from the accumulated fluid. I venture the prediction that the time is not far distant when these cases will be treated more nearly in conformity with established surgical principles, viz., by free and continuous drainage.

The serum should be administered by the gravity method through the needle used to make the puncture. The dose should be large, i. e., 30 to 45 c.c. for an adult, children 15 to 30 c.c. It should be warmed to body temperature and injected slowly by the gravity method. It should be repeated in twenty-four hours. Whether improvement does or does not follow the first dose, the serum should be repeated daily for three or four days, then every third or fourth day till all danger of relapse has passed.

The first evidences of improvement is the mental condition; second, reduction of the fever; third, relief from pain. The rigidity of the neck and limbs is more persistent. Coincident with the clinical improvement is the clearing of the cerebrospinal fluid. With each succeeding dose the fluid becomes less turbid. The serum should not be discontinued until the fluid becomes clear and remains clear for some time. Relapses are dangerous and it is much easier to prevent than to cure them.

Not all cases respond to the serum treatment. This is not strange when we recall that the meningococcus shows marked variations not only in virulence but in type, and that experimentally fast strains, or those resistant to an anti-serum, are occasionally found. While the serum is made as nearly as possible a polyvalent one, it is not probable that any one serum will ever be able to cure all cases. Bearing this variation in mind if I fail to get improvement after two or three injections of one manufacturer's serum I change to another. I have often combined the serum from two manufacturers in the same injection. Whether there has been any advantage from this I am unable to say.

There have been several fatalities reported which were apparently due to the administration of the serum. These are attributed to sudden changes in blood-pressure, due to the too rapid or too complete withdrawal of cerebrospinal fluid. The experiments of Kramer and Hale seem to prove that these fatalities are due to poisoning from the use of tricresol in the serum as a preservative.

In order to limit the spread of the infection, minimize complications, and prevent relapses, the nose and throat of patients and attendants should be treated with some antiseptic. In children I prefer a solution of argyrol.

SUMMARY

Numerous cases of cerebrospinal meningitis throughout the state afford the nuclei for a serious epidemic.

The disease is transmitted by carriers and should be isolated and treated with this in mind.

The nasopharynx of patient and contacts should be treated with some simple antiseptic.

To secure a low death-rate an early diagnosis is imperative.

Lumbar puncture affords the only scientific diagnosis.

Anti-meningococcus serum is the only reliable treatment.

Its efficiency depends largely on the manner in which it is used.

DISCUSSION

Dr. L. Park Drayer, Fort Wayne: The only thing I can say in the discussion of this paper is to emphasize a few points.

First, as to early diagnosis. There is evidently no way of diagnosing cerebrospinal meningitis early except by lumbar puncture. That is the last word to be said about that.

Second, lumbar puncture is not only a means of diagnosis, but is a splendid adjunct in treatment. Why? Because it has been shown conclusively that the moment the secretive process commences inside the cerebrospinal tube there is an increasing amount of spinal fluid secreted, and consequently an intracerebral, intraspinal increase of pressure, and the puncture will tend to relieve that. So that lumbar puncture gives you a diagnosis immediately, and secondly, a road to a rational and successful line of treatment.

Now, I have treated only three cases personally. I had an opportunity to see many, many cases in the New York epidemic, particularly in connection with the disease in the Mt. Sinai Hospital. My mortality has been 66⅔ per cent. Two died, and one recovered. I account for the recovery of the boy, first because of his age, and second because it was late in the small epidemic. This boy made a recovery after fifteen punctures.

I want to emphasize one point in the use of serums. If you are obliged to use serums, change your make frequently. Suppose it is diphtheria, requiring a half dozen injections, change your serum, and in all these diseases that require the use of antitoxins, switch your serum after a certain period of time, and introduce a different family.

I do not believe in saying a case is cured after so many doses. You are only sure when the spinal fluid remains for days and days meningococcus free. Then and only then is your case of spinal meningitis cured.

Under no circumstances will anything tempt me to give anti-meningitis serum subcutaneously.

GENERAL DISCUSSION

Dr. Beasley, Lafayette: What relation is that to the old spinal meningitis we had back in the '60's and '70's?

Dr. Hoskins: Spotted fever?

Dr. Beasley: Yes.

Dr. Hoskins: The same, but the spots are present only in the most virulent type.

Dr. Beasley: The only thing we gave for that was opium. I gave a boy 48 grains of opium in twenty-four hours once, and he got well—but his nerves went to pieces, and he never was much good afterward.

Dr. Albert E. Sterne, Indianapolis: The last remark of Dr. Beasley brings out a very striking thing, and one which I think will be corroborated, and that is that since the days during which we have been employing the sera of various types, we do not see the sequelae, the damaging sequelae in the nervous system that we used to see before the days of serum. Formerly we had a considerable proportion of our diphtheria cases showing permanent damage to the nervous system. The old type of cerebrospinal fever, which is exactly the same condition we are dealing with now—we found the nervous system seriously crippled in after years, and the small proportion that recovered not infrequently showed profound damage to vision, hearing, etc., and marked damage to the sections of the brain affecting the intellect. Since the days of specific sera we do not see this. I can look back—not so far as Dr. Beasley—but a good many years, and I can see the immense change that has been produced since the time when we began the use of specific sera. As a matter of fact we do not see to-day in consultation the cases we used to see ten or fifteen years ago, with the extreme damage to the nervous system so apparent.

I want to emphasize the point that Dr. Drayer made, that spinal puncture is not only a diagnostic measure, but is, quite aside from the use of the specific serum, a therapeutic measure. It relieves the distress of these patients probably more than any one single thing except the serum. Even if we have no serum handy at the first puncture, we will find relief for the patient, and it has been my habit to make this puncture, even if I have no serum. You relieve the spinal tension, and it is only when you make the mistake of taking too much that you are apt to get a disturbance of the relation of the intercranial and interspinal condition, in which event you bring on a sudden headache, which, however, does not last long. As a matter of fact, practically any headache will be relieved by spinal puncture, because a headache means pulling on the membranes of the brain. The brain is not sensitive; you can cut the membranes of the brain and there is no feeling of pain; but if you pull the brain membranes, use traction, or stretch them, then you get the pain that we call headache.

One other point, and that is the peculiar status of the choroid plexus at this time. I am now working on a series of experiments to determine whether or not the choroid plexus is a gland. I believe Frazier is of the opinion that the choroid plexus is not related at all to the gland. If so, it may produce a cerebrospinal fluid as a secretion. Just how it does that I do not know. One peculiar thing in this is that the ordinary bulwark of the nervous system, the fortification of the nervous system, as shown by the choroid plexus, is in this disease absolutely thrust aside. Ordinarily the choroid plexus presents a strong fortification to the nervous system; infections of the blood do not puncture the nerve cells, do not enter into the cerebrospinal fluid so long as the choroid plexus is intact. It seems that when the choroid plexus is damaged, then the nervous system becomes infected. That occurs early here, in contradistinction to almost all other conditions with which we have heretofore had to deal. Just why, I do not know. It is possible that because invasion occurs through the blood-vessels we find these conditions present, just as in poliomyelitis we find early invasion of the nervous system; however, not at the choroid plexus, but directly through the walls of the blood-vessels.

These are points of profound scientific interest which will require time to fathom and much work remains to be done. But the emphasis that Dr. Hoskins and Dr. Drayer have laid on the use of the serum as the only absolutely safe diagnostic measure as presented by the examination of the cerebrospinal fluid must be repeated again and again. We must watch the cerebrospinal fluid from beginning to end.

Dr. W. F. King, Indianapolis: In order to obtain information relative to cerebrospinal

fever we have to have our statistics reported accurately, and that is a point I wish to bring out. We must have a report of the cases, and we must also have a report of the deaths. There is no objection to using the word cerebrospinal fever, or cerebrospinal meningitis, but these two terms are the only ones that should appear on a death certificate. Such terms as meningitis, cerebro meningitis, and spinal meningitis cannot be classified intelligently in mortality reports.

Dr. W. D. Hoskins (closing): I thank you very much for your discussion. Just a word on one point. The cerebrospinal fluid changes pretty rapidly, and the laboratory people complain that by the time the fluid reaches them there has taken place an autolysis and the elements have been changed until it is very difficult to make an intelligent bacterial report, and they suggest that where we are sending cerebrospinal fluid for examinations, unless we can get it to them within an hour or two, that we make smears and send both the smears and the fluid.

As I said, I brought this subject before you with the idea of calling attention to the possibility of an epidemic, and asking you to be alert, so that lives may not be lost because we are not wide awake.

GAS BACILLUS INFECTIONS *

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B. welchii, familiarly known as the gas bacillus, is one of the most interesting organisms known to bacteriologists. The number and variety of pathologic conditions in which it has been assumed to play an etiologic rôle is remarkable. It has been assigned as the cause, either directly or indirectly, of foamy organs in the cadaver, gas phlegmon, gaseous gangrene, acute articular rheumatism, pernicious anemia, auto-intoxication, diarrhea, both in adults and infants, multiple ulcers of the stomach, and the necrosis and ulceration of Peyer's patches in typhoid fever. In the little more than twenty years that have elapsed since this bacillus was first discovered, an extensive literature has accumulated so that a bibliography collected about a year ago contained more than 450 separate titles.

No less astonishing is the number of names that have been assigned to this organism by different investigators. First described briefly and inadequately by Achalme in 1891, it was called by him the bacillus of acute articular rheumatism. Welch and Nuttall in 1892 gave the first satisfactory description of this bacillus under the name B. aerogenes capsulatus. Frankel in 1893 isolated an identical organism from cases of gas phlegmon and called it B. phlegmonis emphysematosae. Klein, in 1895, found this organism in the stools of patients suffering from diarrhea and designated it B. enteritidis sporogenes. In 1898, Veillon and Zuber isolated it from several cases of appendicitis and gave it the name of B. perfringens. In 1900, Schattenfroh and Grassberger gave to an identical organism which they found in the market milk of Vienna the sesquipedalian title of Granulo bacillus saccharobutyricus immobilis liquefaciens.

This last heroic effort seems to have ended the attempts to find a name for this remarkable organism. But all these names stand in the literature much to the confusion of one who attempts to read extensively on the subject unless he is fortunate enough to find early that Dr. Welch compared one of Frankel's original cultures of B. phlegmonis emphysematosae with his own B. aerogenes capsulatus and found them identical; that Jackson similarly compared Welch's bacillus with Klein's B. enteritidis sporogenes and found that they were culturally and morphologically the same; that von Hibler compared Frankel's organism with Schattenfroh and Grassberger's long-named bacillus and found that they were similar in all respects except virulence; and that Hewlett performed a similar service with the bacillus of Achalme and that of Klein and found them to be the same organism. By applying the mathematical axiom that "things that are equal to the same thing are equal to each other," much, but not all, of the confusion and difficulty is relieved.

When a large number of strains of B. welchii, isolated from a variety of sources, are studied it is found that while they resemble each other sufficiently to be classed under the same name, it soon becomes evident that there exist minor differences which enable us to subdivide this group of bacteria into subgroups, much as the B. coli group is subdivided. Before referring to the attempts at classification of this group, its cultural and morphologic characteristics and its distribution in nature must be briefly discussed.

B. welchii is a large anaerobic bacillus with slightly rounded ends, non-motile and Gram-positive. Spore formation occurs in nature,

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but is inconstant in artificial media, occurring only in artificial media which are neutral or slightly alkaline and free from fermentable sugar. It may or may not slowly liquefy gelatin. It ferments, with the production of both acid and gas, all of the mono- and disaccharides. It causes stormy fermentation of milk with production of the odor of butyric acid.

This last named reaction is the one made use of in isolating and roughly identifying the organism, as follows: A tube of freshly sterilized whole milk is inoculated with the desired amount of the suspected material and heated to 80 C. for fifteen minutes, cooled and incubated. If spores of B. welchii were present in the material used the milk in twenty-four to forty-eight hours will show coagulation, the separation of clear whey and such abundant gas formation that parts of the porous curd will be driven above the cream layer and may even be forced up against the cotton plug. There will also be present a distinct odor of butyric acid. A smear made from the clear whey will usually show a pure or almost pure culture of B. Welchii.

The spores of this organism have an astonishingly wide distribution. They have been found in the air and in dust, once at least, in the dust from an operating room. They are very numerous in most soils—garden earth, street dirt, etc. Klotz and Holman, who found gas bacillus infections especially frequent among coal miners, found the spores of this organism very abundant in the dirt from coal mines. (Several years ago I sent a questionaire to physicians to a number of coal mines in Indiana and learned that gas bacillus infections were relatively rare among Indiana miners.) Spores of B. welchii are invariably found in sewage, sometimes in water, and frequently in milk. Their sanitary significance in water and milk has been disputed. They are practically never absent from polluted waters; but the fact that they may remain viable in soil with only slight reduction in numbers for more than a year renders their mere presence in water of less value as an indication of recent pollution than the presence of B. coli is. Their presence in considerable numbers in milk, however, is good evidence of filthy methods of handling. I have never failed to find them in milk containing visible dirt. They are not destroyed by pasteurization. They are almost never present in butter.

Spores of B. welchii have been found in oysters and other shell fish, especially if "fattened" in polluted water. They have been isolated from a great variety of foodstuffs; from cheese, meats, rice pudding, sausage, sugar, flour, oleomargarine, and "tinned fruits." They can almost always be obtained from the washings from lettuce, potatoes and similar vegetables bought in open market. These spores have been found in a large percentage of blank cartridges examined for them. They have been isolated from vaccine lymph and from crotalus venom placed on the market for use in the treatment of epilepsy. (At least one case of gas bacillus infection has been reported following snake bite.)

The spores of this organism have been isolated in numbers from the intestinal tract and feces of every species of domestic and wild animal, herbivorous and carnivorous, especially if the wild animals had been kept in captivity.

B. welchii has been isolated from almost every part of the human body unassociated with any pathological condition. It has been found on the skin; in the mouth, both of newborn infants and of adults; in the tonsils; in the normal salivary glands; in the normal appendix removed at operation; in normal urine; in the vagina, of which it is, according to some, a normal inhabitant. A study of the distribution in the human gastro-intestinal tract made at necropsies done very soon after death showed that B. welchii is limited almost entirely to the large intestine, appendix and, sometimes the lower part of the ileum.

Spores of B. welchii can be isolated from human stools almost without exception. Especially is this true of adults. Of ten infants whose stools were examined during the first week of extra-uterine life, four gave positive results. This being true the question of the possible pathologic significance of the presence of these spores in the gastro-intestinal tract is an important one and will be discussed more in detail later.

A study of some fifty strains of B. welchii isolated from a variety of sources has led to the conclusion that this group can be subdivided according to their ability to ferment glycerin and inulin and to sporulate in neutral media containing these substances. On this basis four sub-groups have been formed. This plan does not, however, distinguish culturally between virulent and avirulent strains, a distinction which is probably impossible by cultural methods. One rather remarkable fact came from this subdivision, namely, that none of the strains of B. welchii isolated from diarrheal stools of infants fell into the same group

with those isolated from cow feces. The facts are not yet sufficiently numerous to permit a dogmatic statement, but it at least appears possible that the strain of gas bacillus normally found in cow feces and therefore the one most likely to occur in milk, may not be capable of causing diarrhea. If this proves to be correct, human gas bacillus carriers will assume an importance similar to healthy carriers of other infectious organisms.

B. welchii has been found associated with a wide variety of acute infections, frequently as the chief etiologic factor, sometimes in a secondary rôle. It has been found in infections of the eye, in carious teeth, in the accessory sinuses of the nose and in otitis media and mastoiditis. It has been isolated at least once (Kendall) from a tonsil removed for chronic tonsillitis. Meningitis due to the gas bacillus has followed fracture of the skull and numerous gas cysts have not infrequently been found at necropsy, indicating that B. welchii had entered the general circulation before death.

B. welchii has been found associated with gangrene of the lung and infarction of the lung. A number of cases of pyopneumothorax due to this organism are on record, and the condition has been produced experimentally in animals by intrathoracic injection of virulent cultures.

The relation of B. welchii to pathologic conditions in the gastro-intestinal tract other than diarrhea has received much attention. Schultz found this organism in very great numbers in the walls of multiple ulcers of the stomach in a patient dead from gastric hemorrhage. Howard noted "superficial ulcerations of the intestinal mucosa" at necropsy on four bodies showing "foamy organs" due to post mortem growth of the gas bacillus in the tissues. Loris-Melikov believed that this organism plays an important rôle in typhoid fever. He found its spores in greater numbers in the stools of those typhoid patients who showed severe gastro-intestinal symptoms, than in stools of patients in whom the symptoms were more those of a severe toxemia. He believed that B. welchii and a constantly associated anaerobe, which he called B. satellitis were important factors in such complications as perforation and hemorrhage. Because of its power of gas formation it may be important in the etiology of meteorism in typhoid.

B. welchii has frequently been isolated from inflamed appendices, but the etiologic relation of this and other anaerobic bacteria to appendicitis is not settled. Its presence was first noted in infections of the appendix by Veillon and Zuber. It is not infrequently found in the normal appendix removed at operation or at necropsy. I isolated this bacillus from approximately 90 per cent. of all appendices examined (normal and diseased) and from 100 per cent. of those which contained appreciable amounts of fecal matter. According to Grigoroff, in normal appendices aerobic and anaerobic bacteria are present in about equal proportion, while in inflamed appendices anaerobic organisms were strikingly predominant. Heyde, who has made one of the most careful and extensive studies of this problem found anaerobic bacteria more numerous than aerobic in twenty-five out of twenty-six cases of appendicitis. He found that anaerobes, among which was B. welchii, were especially abundant in the earliest stage of the inflammation and at the advancing margin of the infection, and that anaerobic organisms were able to penetrate the wall of the appendix more rapidly than aerobes. This last statement is confirmed by Ikonikoff, Garnier and Simon, Rocchi and others, who found that in intestinal obstruction, accidental or experimentally produced, anaerobic bacteria were the first to appear in the peritoneal cavity and in the circulating blood. The well known rapidity with which gaseous gangrene spreads is another indication of the ability of anaerobic bacteria to penetrate tissues.

B. welchii has been found in a large number of cases of peritonitis, especially those of the endogenous type, usually associated with other organisms.

It will be impossible to do more than briefly refer to other infections with this organism. It has been the cause of acute inflammatory processes in all parts of the male and female genito-urinary tract. Puerperal sepsis following labor or abortion and due to B. welchii either alone or associated with other organisms, notably streptococcus, is not very uncommon. The mixed infection is much more serious than the pure gas bacillus form. Since Sheidler and others believe that B. welchii is a normal inhabitant of the human vagina it is not surprising that infections with this organism occur.

The gas bacillus appears to be able to cause a rapidly fatal form of septicemia without any evident point of entry into the body. In many of these cases there is a marked purpura hemorrhagica which in one case involved almost the entire body. In one reported case of septicemia in which the point of entry was the

uterus after abortion, there was gas formation throughout the body before death.

The literature dealing with emphysematous gangrene and gas phlegmon due to gas bacillus has recently been collected by Stewart. He gathered sixty-one cases which showed a mortality of 55 per cent. The methods of treatment and the character of the descriptions, clinical and bacteriological, of such cases have been so lacking in uniformity that little value can be attached to mortality statistics based on reports in the literature. The method of treatment by free incision, exposure to air, and irrigation with hydrogen peroxid and amputation when necessary appears to have given the best results.

I have been able to collect records of 174 cases of emphysematous gangrene and gas phlegmon with a mortality of approximately 45 per cent. These may be classified according to the injury causing them, as follows:

	No. of Cases
Compound fracture	61
Arm and forearm	27
Leg and thigh	34
Simple fracture	6
Lacerated wounds	28
14 being in the lower extremity.	
Crushing injuries	21
Gunshot wounds	10
No previous injury	4
Following hypodermic injections	9
After surgical operations	11
Miscellaneous	24

Although infections with this organism are usually associated with marked gas formation, in some instances the production of gas is absent. B. welchii has been found in an abscess in the neck of a dog, in multiple abscesses of the liver, in infections of the middle ear and of the antrum of Highmore, in the peritoneal cavity and appendiceal abscesses, in enlarged lymph glands, and in rapidly spreading gangrene of the subcutaneous tissues, without the production of gas in any of the cases.

In 1891, Achalme isolated at necropsy from the heart's blood and from the joints of a patient dead of acute articular rheumatism a bacillus since shown to be identical with B. welchii. This report received no attention apparently until 1897, when Achalme communicated the results of further studies and described other cases of rheumatism in which his bacillus was present. The literature on the subject at once became abundant and some of the French physicians were still adding to it in 1913. A large number of cases were reported in which B. welchii was isolated from joint and heart lesions, and claims were made that acute articular rheumatism had been produced in experimental animals by the intravenous injection of cultures of this organism. The organism has also been reported to have been isolated from the blood during life in acute articular rheumatism and in associated pathological conditions such as chorea. Rosenow has recently added some interest to this question by finding B. welchii in the enlarged lymph glands draining joints showing the lesions of arthritis deformans. These glands were removed from living patients with the strictest surgical asepsis. In none of these cases of acute articular rheumatism, endocarditis, or arthritis deformans was there any gas formation in the tissues.

It may be asked how an organism whose characteristic lesion is gaseous gangrene can be found in the tissues associated with rheumatism or in non-gaseous gangrene without producing the lesion so commonly found. As an analogy one need only think of the variety of lesions produced by the streptococcus, and to consider the well-known effects of differences in virulence possessed by different strains of the same organism. In the case of infections with B. welchii, however, another factor must be considered, namely, the degree of an anaerobiosis present in the medium. The reaction of this organism in milk is usually very striking and unmistakable but it is possible to obtain a negative result even in the presence of large numbers of the gas bacillus or its spores, if the proper degree of anaerobiosis is not obtained. One may get all degrees of reaction from no change in the milk, through simple coagulation without gas formation, simple coagulation with only a few small bubbles of gas up to typical "stormy fermentation" in which the porous curd is blown up against the cotton plug, all by the simple means of varying the amount of oxygen left in solution in the milk.

In the case of severe injury to tissues as in lacerated wounds, crushing injuries, compound fractures, etc., there is a sufficient degree of anaerobiosis in the dead tissue to allow the organism carried into the wound to begin to grow and produce its characteristic lesion. By its own products and those of other bacteria present more tissue is damaged or killed, and thus the infection spreads. In case B. welchii finds itself in living tissue, as in a lymphatic gland, it succeeds in adapting itself to the amount of oxygen present to such a degree that it is able to live but not to produce gas

gangrene. Under these conditions it is not inconceivable that its pathogenic properties may be so altered that it will produce a lesion as different from gas gangrene as erysipelas is from streptococcic cellulitis.

This great sensitiveness of the gas bacillus to oxygen tension may be an important element in the well-known marked resistance of the human body to infections with this organism. Westenhoffer even claims that B. welchii is a pure saprophyte and produces its effects in dead tissues only. For its occurrence unfavorable conditions in the tissues invaded are necessary. Of the 174 cases of gaseous gangrene and gas phlegmon collected above, 126 resulted from such serious, severe injuries as compound and simple fractures, lacerated wounds, crushing injuries and gunshot wounds, while only in four cases was there no definite history of previous injury.

As pointed out by Kamen, the gas bacillus shows a special predilection for certain tissues of the body. As a rule it either lodges in loose connective tissues (mechanical lodgement) or in the liver or voluntary muscles where it finds a supply of utilizable carbohydrate (glycogen).

B. welchii is able to cause infection either alone or in symbiosis with any of the various pyogenic bacteria. The type of infection will be determined in large measure by the presence or absence of pyogens, and also by the tissue invaded. In general, pure infections with B. welchii are associated with an exudate which is remarkably free from pus cells. There is little inflammatory reaction. The organism and its products show a negative chemotaxis. The meninges furnish an exception to this rule in that in the two cases of pure gas-bacillus meningitis thus far reported (Howard, and Hitschmann and Lindenthal) the exudate has been distinctly purulent.

In cases of mixed infections with any one of the pyogens, the reaction of the tissues is more definitely an inflammatory process and the exudate is purulent in character.

Herter studied the stools of seventeen patients with pernicious anemia and found B. welchii much more abundant in them than in stools of normal individuals. It is known that many of the animals in the New York Zoological Gardens frequently suffer from an anemia of the pernicious type. Herter found B. welchii excessively abundant in stools of these animals. Klotz and Holman, and others have called attention to the marked anemia and evidence of the destruction of red blood cells in patients with gaseous gangrene due to B. welchii. The blood serum of patients with gas bacillus sepsis frequently gives a spectroscopic test for hemoglobin. It is well known that some strains of the gas bacillus produce hemolysins. The neutral filtrates from some of my cultures were strongly hemolytic.

The stools of pernicious anemia patients which I have examined contained astonishingly large numbers of spores of B. welchii, ranging from 625,000 to 7,500,000 per gram of dried feces. In only two instances was the number less than 2,500,000. The stools of normal individuals rarely contain more than a few hundred spores of the gas bacillus per gram of dried material.

From the data at hand it is not possible to draw any definite conclusion as to the actual relation between the disease pernicious anemia and the excessive numbers of spores of B. welchii so constantly found in the stools of such patients. It would be the height of temerity, perhaps, to say that B. welchii is the cause of pernicious anemia; especially since, of the four strains of this organism which I isolated from stools of patients with this disease, one produced no hemolysin, two caused only slight hemolysis, while only one produced a strongly hemolytic substance. It is equally impossible to consider that such an invariably constant finding as the enormous preponderance of the spores of B. welchii is entirely without significance. It may mean no more than that some unknown element renders the intestinal tract of a pernicious anemic patient an especially favorable environment for the growth of this organism. Even so, it is conceivable that such a patient would at least not be made worse by treatment directed toward the reduction of the numbers of a species of bacteria some strains of which are known to produce strongly hemolytic substances.

B. welchii is a normal inhabitant of the adult human gastro-intestinal tract. The relation and absolute numbers of this organism present in the human intestine vary in the different age periods, in different individuals, and in the same individual at different times. The gas bacillus is said to be the predominating organism among bacteria found in meconium. I have isolated a highly virulent and strongly hemolytic strain from the stool of an infant on the second day of life. This organism, however, gives place very promptly to the normal nursling flora, of which such acid producers as B. bifidus is the chief representative. After the nursing period B. welchii again appears in the stools and, in general, tends to

increase in relative numbers with the age of the patient. The number of spores of this organism in the stools of normal individuals is never very great. In the case of one healthy adult whose stools were examined twice a week for a considerable period of time, the number of spores were always considerably less than 1,000 per gram of dried feces except on two occasions after the administration of a cathartic. Spores of the gas bacillus are frequently very abundant in the intestinal tracts and stools of elderly persons. B. welchii is occasionally found in the small intestine, but it is usually limited in its distribution to the cecum and colon.

There is good reason to believe that the gas bacillus can cause two distinct types of digestive disturbance in adults: (1) the chronic excessive saccharrobutyric intestinal putrefaction, described by Heter, and (2) diarrhea.

The type of intestinal putrefaction is not infrequent among adults, especially among elderly persons. The stools of such patients are soft, light in color, of low specific gravity, have the odor of butyric acid, and contain B. welchii or its spores in excessive numbers. Clinically, this condition is characterized by an irritability of the digestive tract with a tendency to a desquamation of the epithelium of the mouth. Carbohydrates are badly borne, excessive intestinal flatulence and sometimes slight diarrheas following the use of considerable amounts of cereals and starchy foods. There is also a slowly developing anemia of the secondary type in most cases. Some of these patients become confirmed invalids.

Many adults, especially after they reach middle life, suffer either from a chronic but usually mild form of diarrhea or from a tendency to periodic attacks of diarrhea. The stools of many of these patients show excessive numbers of spores of the gas bacillus. The patients are quite regularly and promptly made worse by a carbohydrate diet and improve, sometimes quite rapidly, on a "pure proteid" diet, especially if buttermilk is added.

The problem of diarrhea in infants is much more perplexing. Some cases are probably due to improper food without any definite connection with any one or more bacteria. But it is difficult to avoid the conclusion that in most cases bacteria play the leading rôle. But it must be emphasized at the beginning that the severe acute summer diarrheas which have the monotonously constant syndrome of "prostration and fever associated mucus, pus and sometimes even blood, in the movements," as emphasized by Kendall, may have a very varied etiology and be caused by bacteria of very unlike characteristics. It may even happen that during one summer one organ may predominate as the etiologic factor, and in the next summer, another. For instance at the Boston Floating Hospital, "one year the dysentery bacillus was the dominant type met with; the second year streptococci were conspicuous; the third summer was noteworthy because of the great number of cases in which the gas bacillus was the predominant organism encountered;" while in the fourth summer an entirely different organism, somewhat resembling B. mucosus, made its appearance (Kendall).

The important fact in this connection is that clinically the diarrhea observed in different summers and presumably caused by different organisms, did not differ sufficiently in their clinical manifestations to enable one to make a diagnosis as to the etiology. And yet a bacteriologic diagnosis was of very great importance. For, whereas, patients with diarrhea due to streptococcus or dysentery bacillus either improved or were not made worse on a carbohydrate diet, the gas bacillus cases became violently worse when given a diet even fairly rich in carbohydrates. There appear to be two factors necessary to the multiplication of B. welchii in the intestine: (1) an excess of utilizable carbohydrate; and, (2) a deficiency of organisms in the intestinal tract capable of forming lactic acid from carbohydrate in sufficient volume and concentration to inhibit the growth of the gas bacillus which is "rather sensitive to lactic acid." It is probably the butyric acid produced by B. welchii which acts as the irritant causing the diarrhea even to the extent of mucus, blood and pus in the stools.

There is little difference between the stools in true bacillary dysentery and diarrhea due to gas bacillus. In the latter the stools are a little more likely to be acid in reaction, while those in bacillary dysentery are more likely to contain blood. But neither of these phenomena is pathognomonic for one or the other type of infection. The most striking clinical difference is the result of feeding carbohydrates. The administration of a 5 per cent. solution of lactose to a child with bacillary dysentery, causes either no change or the patient actually improves. If given to an infant with a gas bacillus infection, the diarrhea immediately becomes worse and the temperature shows a rise of from one to three degrees.

There is little or no penetration of the intestinal mucosa by the gas bacillus. In the few

cases which have come to necropsy there have never been found the ulcers so characteristic of infections with B. dysenteriae. There may be a pin-point exudate, or in very severe cases, a pseudo membrane over the mucous membrane of the large intestine.

To recapitulate briefly, we have in B. welchii an organism which is capable of producing a wide variety of pathologic conditions, either alone or in symbiosis with other organisms. In addition to the well known lesions of gas phlegmon and emphysematous gangrene, it is probable that it may play a not negligible part in such diverse conditions as certain diseases of the joints and pernicious anemia, not as the first cause of the disease, but rather assuming the rôle of an accomplice after the fact. Its relation to certain forms of gastro-intestinal disturbances both in adults and infants is more evident as indicated by the following considerations:

B. welchii is a normal inhabitant of the intestines of adults and is sometimes found in the stools of healthy infants but always in small numbers only. When examinations of the stools of the same person are made at frequent intervals it is found that there are frequent marked fluctuations in the number of spores of this organism present; that during a period of constipation there may be either an increase or a decrease; and that as a result of a cathartic there may be a pronounced increase in the number of spores in the stools. The reasons for these fluctuations are probably to be found in the daily variations in diet. These normal variations are never such that the number of spores reaches that observed in certain pathologic conditions such as pernicious anemia and diarrhea.

B. welchii is said to be the cause of a fairly definite type of diarrhea, especially in infants. What is the evidence on which this claim is based? (1) In such cases the spores of this organism are found in excessive numbers in the stools of the child. While the methods of determining this have necessarily been crude they probably give a fairly approximate idea of the number of spores present. While different strains of B. welchii show considerable variation in the rate of growth, it is a permissible conclusion that a loopful of feces which gives a positive reaction in heated milk in twenty-four hours or less contains a greater number of spores than a loopful of a specimen which requires forty-eight to seventy-two hours to develop a positive reaction in milk. But in interpreting such a test two things must be borne in mind: (a) that there is often great variation in the number of spores in different parts of a fecal mass; and (b) that the degree of anaerobiosis in the tube of milk will influence both the speed of the reaction and the character of it. If milk that has been standing more than a week is used heating it to 80 C. for fifteen minutes will not always produce a sufficient degree of anaerobiosis for the best growth of B. welchii. Either the production of stormy fermentation will require a longer time, or the reaction will not be typical, only acid and coagulation without gas formation being the result. A negative reaction may therefore be recorded when it should have been positive. This can be avoided by the use of freshly sterilized milk.

(2) Patients with diarrhea associated with an excessive number of gas bacilli in the stools are made worse by feeding them on a diet rich in carbohydrates, and they show improvement when the diet is changed to one of pure proteid with or without buttermilk.

The arguments against the claim that B. welchii is causally related to the diarrhea with which it is frequently found associated, may be stated and answered as follows:

1. B. welchii is constantly present in the stools of adults and may be present in small numbers in the stools of healthy infants. Variations in individual susceptibility explain the failure to cause diarrhea in some cases; variations in the pathogenicity of different strains of the organism explain its harmlessness in other cases; while absence of those conditions of diet, etc., which favor its assuming a pathogenic rôle explain its failure to produce diarrhea in still other cases.

2. B. welchii is present in unusual abundance in the meconium when the intestine of the infant is entirely without defense. In this case the promptness with which the defense, in the form of the normal nursling intestinal flora, is established saves the child from disaster.

3. In children given cow's milk from birth the meconial flora, of which B. welchii is frequently the predominant organism, is slow in disappearing, from fifteen to thirty days being sometimes required. But during this period, B. bifidus and other protective organisms are present and are gradually getting the upper hand. If bottle-fed babies are given mother's milk for the first eight days of life, B. welchii is not afterwards found in the stools under normal conditions.

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EDITORIALS

PROFESSOR THOMPSON AND ILLINOIS METHODIST MINISTERS ON WINE OF CARDUI

A remarkable controversy has been precipitated by a most interesting article entitled, "Press of the Methodist Episcopal Church—Is It Muzzled?" by the Hon. S. H. Thompson, State Superintendent of Public Instruction in Tennessee, and formerly a secretary of the General Conference of the Methodist Church. Briefly Prof. Thompson says that *The Journal of the American Medical Association* has published an exposé of Wine of Cardui. It seems that the senior partner in the firm which manufactures Wine of Cardui has occupied a very influential office and prominent position in the Methodist Church. Among other things, he has been chairman of the Book Committee, from which he has recently resigned, which controlled the official press of the Methodist Church. All of the Methodist papers had been asked to publish a protest signed by thirty-two Illinois ministers, which was headed, "Mr. Patten and the Methodist Episcopal Church." It appears that this protest was not published in any Methodist paper until after Mr. Patten's resignation as chairman of the Book Committee. The manufacturers of Wine of Cardui have a number of suits for libel pending against the American Medical Association and its editor, and Dr. Oscar Dowling, the president of the State Board of Health of Louisiana, and *Harper's Weekly,* for various allegations in regard to this alleged remedy.

The Illinois ministers, among other things, say: "The question, therefore, for the Methodist Episcopal Church to decide is whether they desire in place of high leadership a man who is selling a medicine consisting of one-fifth pure alcohol; nay more, who is urging through large advertising the buying of this medicine. The outcome of the suit has nothing to do with the answer of the church to this question. Lager beer contains 2 to 3 per cent. alcohol; ale, porter and export beer contains 3 to 6 per cent. alcohol; champagne contains 8 to 10 per cent. alcohol. The dose of Wine of Cardui is, according to label, one tablespoonful—half an ounce—to be taken three or four times a day. We are reliably informed that every tablespoonful contains forty-eight drops of pure alcohol or the equivalent of about one hundred drops of whisky. The girl or woman who takes four tablespoonfuls of this nostrum daily, therefore, gets the same amount of alcohol that she would obtain if she took four hundred drops of whisky, or, to put it another way, the same amount of alcohol as she would get from one-quarter of a pint of champagne or about two-thirds of a bottle of beer. The Chattanooga Medicine Company is therefore recommending to the girls and women of the country that their strength would be greatly increased by drinking the equivalent of two-thirds of a bottle of beer every day until they feel that they are entirely well. * * * Again, we reiterate, this has nothing to do with Mr. Patten's suit against the American Medical Association. Even if he should gain the suit and recover $300,000, it would not in the least decrease the fact that he has been making money by encouraging the use of a so-called remedy which contains 20 per cent. of alcohol, double the amount contained in champagne, or three times the amount of alcohol contained in the heaviest beer sold in the market." This earnest protest is signed by thirty-two active ministers of the Methodist Church, and we have quoted it from the February 10 issue of the Kansas City, Mo., *Central Christian Advocate,* which devotes practically the entire issue to the matter.

In a very interesting editorial, the editor of this important Methodist publication squares himself under four heads as follows:

First. Personally, we do not believe in self-medication.

Second. We do not believe in a medicine with a strong alcoholic base.

Third. We disapprove absolutely of advertising methods which are improper.

Fourth. We disapprove of its flamboyant advertising.

Under each of these heads, enough verbiage is introduced to give both sides of the question, if it can be said that there is a side for a nostrum of the class to which Wine of Cardui

apparently belongs, but there can be no question in the minds of those who are informed on the subject that when this entire matter is thrashed out that the Methodist Church will ring true in regard to it, and that to no small degree this will be due to the courageous attitude of Prof. Thompson who writes, apparently, as a reluctant witness against a warm personal friend.—*Kentucky Medical Journal.*

SWAT THE FLY POISON PERIL

Of forty-seven cases of arsenical poisoning of children reported from fifteen states from July to October, 1914, in thirty-four the children were 3 years old or less. In thirty-seven the children had drunk poisoned water from a saucer containing fly paper. In eight cases the children were poisoned by sucking the wicks in tin receptacles containing arsenic, sugar and water. In two cases the children were poisoned by sucking a sponge used to moisten these wicks in poisonous fly destroyers.

The similarity of the symptoms of arsenical poisoning to those of cholera infantum make it quite certain that there are a great many more cases than are reported. Cholera infantum, one of the most common ailments of very young children, is prevalent at the time these poisonous fly killers are most used.

Most of the children are too young to tell the cause of their illness and unless seen taking the poison, arsenical poisoning may not be suspected.

Arsenical fly killers are commonly placed within the reach of young children. As sugar is used with the arsenic for the purpose of drawing the flies, the arsenical fly killers in whatever form are extremely dangerous to children. Many more deaths are caused by them than were caused by the phosphorous match, which practically has been abolished because of the fatalities to children. No deadly poison is so commonly put within the reach of children as is arsenic for killing flies.

As there are effective and safe methods of killing flies there is no excuse for using poisonous fly killers of any kind. The use in the home of poisons of any kind is dangerous, but all other poisons combined do not present the same dangers to children as do the poisonous fly killers. The little ones should be protected from this really grave and exceedingly common danger. SWAT THE FLY POISON PERIL! —*Child Betterment and Social Welfare Bulletin.*

NEW AND NON-OFFICIAL REMEDIES

The 1915 edition of the New and Non-Official Remedies has come from the press of the American Medical Association. It contains descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to January 1, 1915. The acceptance of the articles included in the book is based in part on evidence supplied by the manufacturer or his agent, and in part on investigation made by or under the direction of the Council. While it is possible that some minor errors have been made, yet in the main the book is not only trustworthy but should be a guide for all progressive physicians.

The Council desires physicians to understand that acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council. The book will be sent postpaid for 50 cents (paper bound), and $1 (cloth bound) by the American Medical Association, 535 N. Dearborn St., Chicago. The object in publishing this book is to protect the medical profession and the public against fraud, undesirable secrecy and objectionable advertising in connection with proprietary medicinal articles.

The Council endorses the principle that prescriptions should be written on the basis of the therapeutic effects of the individual ingredients. For this reason it does not include in New and Non-Official Remedies mixtures unless they present some real advantage. The physician who wishes to prescribe ready-made proprietary mixtures will find in the index of the book, listed under the name of the manufacturer, those proprietary mixtures which on examination have not been found to conflict with the rules of the Council. Mixtures of non-proprietary substances are regarded as non-proprietary and therefore are not contained in the book.

The book should be used more generally by the medical profession for it offers a safe guide for the physician who wishes to pursue the right course in therapeutic practice. In other words, the physician who is tempted to prescribe any new and non-official remedy is provided with other information than that furnished by the manufacturer in determining the composition and character of the remedy under consideration. It has been found by experience that many proprietary preparations have been

manufactured and sold under grossly exaggerated claims as to composition, therapeutic indications, and curative results. This misleading information has resulted in great harm to the medical profession as well as to the public, and the work of the Council has detected these misrepresentations and resulted in the publication of the official reports that find a place in the book that is now offered to the medical profession as a guide covering the products that have been found worthy of acceptance.

GREAT CHANCES FOR MEDICAL PROGRESS

The Indianapolis *News* calls attention to the fact that medical science is having much encouragement in the United States these days, and goes on to say that it has been but a short time since complaint was made, and justly, that there was no opportunity for scientific research in medicine in this country except as private practitioners could give their time to it. Students felt that they must go abroad, particularly to France and Germany, to get the full benefit of the latest discoveries in their field. England offered less opportunity and it was said by a London physician only the other day that in this country most of the research is done by men in private practice, hampered by the necessity of earning their living in the intervals of their investigations and experiments.

The establishment of the Rockefeller Institute in New York for the sole purpose of conducting medical experiments along scientific lines was the first important step toward removing the reproach against the profession in this country. Its existence has been amply justified by the discoveries made in connection with various diseases. But one such institution is not enough, and the gift of $1,500,000 from the General Education Board, founded by Rockefeller, to the Johns Hopkins Medical School will help to supply a further need in this direction.

Through this endowment physicians engaged as lecturers to conduct clinics will no longer find it necessary to supplement their incomes by outside practice. They may treat patients outside of the hospital, but will accept no personal fee for the service. They will be free to devote their entire time to teaching and to research work. Many physicians and scientists of the highest standing have been connected with this school, the celebrated Dr. Osler for one. Dr. Ira Remsen of the supervisory board of chemistry for the Agricultural Department is still associated with it and it is likely to become a center for men of this class.

Following the endowment of the Johns Hopkins school comes a $4,000,000 gift to the medical department of Cornell University. The donor is anonymous, but is understood to be Col. Oliver H. Payne of New York City. It is not specified that any part of this shall be devoted to research, but this follows as a matter of course, for an annual income of something like $200,000 in addition to what was already provided will hardly be needed for the purpose of instruction alone. With these munificent gifts the United States is in a fair way to lead the world in advancing medical science.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association.* Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

The Indiana State Food and Drug Commissioner has published a pamphlet on medical frauds which is worthy of inspection by every medical man in the state. It shows a list of fraudulent, near fraudulent, worthless, and overpriced preparations advertised and sold to the public. A copy of the Bulletin may be obtained by writing the Indiana State Board of Health.

We note that there is a possibility that we shall receive salvarsan and neosalvarsan of Canadian manufacture owing to the granting of a license for the manufacture of those compounds following the threatened action to declare the German patent in abeyance. It is hoped that if made they will meet all of the requirements of the original German preparations and be sold at less cost to the consumer.

There is rather conclusive evidence to show that the opposition to Dr. Hurty is actuated by personal reasons. The State Board of Health, with Dr. Hurty at its head, has been fearless in its prosecution of law breakers, and some of those who have suffered are getting their revenge for the enforcement of the law by attacking the one who was responsible for law enforcement. What must society expect when its executive officers are attacked because the law is enforced!

The *Kentucky Medical Journal* in its issue of March 1, lamely explains why it carries the advertisement of Old Taylor Whiskey. Incidentally it gives Old Taylor Whisky a puff that should go a long way toward increasing the sales of that beverage, to say nothing of stimulating the distillers to continue their advertising in the journal that treats them so handsomely. Well, perhaps that is the proper thing in Kentucky!

Our local officials may not be able to convict quack doctors and incompetents for practicing medicine in defiance of the laws, or for fraudulent practices, but we notice that Uncle Sam does the work very effectively when he once gets after malefactors. One of the advertising quacks of Indiana who wrote a prospective patient whom he had never seen that the patient was suffering from a very serious malady which he (the quack) could cure, has been indicted for fraud and stands a good chance of severe punishment.

Why do doctors procrastinate in the payment of medical society dues? Is it a good plan to have a reputation for being negligent, indifferent, and having poor business qualities? Doesn't it hurt us with the public? There are many delinquents in the matter of association dues, and no excuse for it. Every member knows that his dues are payable on or before January 1 and become delinquent on February 1. The amount is small and the average doctor can pay it one time as well as another. It places the doctor in an unfavorable light to be guilty of neglect of necessity as well as duty.

For the benefit of several new county secretaries, who will be the financial agents for the coming year, it should be stated that the dues of the State Association are fixed by the House of Delegates at $2 per member per fiscal year, and there is no authority vested in any one to pro rate these dues. This means that members cannot elect certain privileges of the Association and pay for those only. If they do not wish the medical defense, they need not call on the committee; if they do not wish The Journal, they need not read it, but the dues are $2 per year for one and all. Members joining late in the year may make special arrangements with the county society for reductions of the local dues, but the State Association dues are the same whether paid in January or the last day of December.

Charles N. Combs, Secretary.

How many doctors have been induced by the enterprising manufacturers to use formamint tablets and have prescribed them for patients? Time was when it was thought that formamint tablets would be manufactured, sold, and prescribed in an ethical way, but now that the doctors have gotten the public familiar with formamint tablets, with the name stamped on every tablet, the manufacturer jumps out of the ethical "band wagon" and goes over to the daily papers where he flaunts his wares with all of the extravagance which goes with proprietary announcements in the secular press. Is it any wonder that the American Medical Association asks doctors to use the book entitled "New and Non-Official Remedies" as a guide when prescribing proprietary preparations?

The Twilight Sleep Association had its first public meeting held in New York City, February 17, and announced the preparation of the blacklist for American doctors who do not administer the scopolamin-morphin treatment in the manner approved by the organization. Mrs. Mary Sumner Boyd, of the executive committee, after describing the Freiburg method, asserted that popular demand for the "twilight sleep" has caused many American practitioners to use the two drugs but without any regard for the formula adopted by the German experts. The Twilight Sleep Association is going to "preserve the Freiburg standard." The list of officers and endorsing committee does not contain a single person listed as doctor. The majority of the women who have interested themselves in this movement are widely known for their suffrage activities. —*The Lancet Clinic,* Feb. 27, 1915.

The secretary of one of our county units bought a syringe from one of our advertisers, and in a letter to him remitting the amount, he says that he will call the attention of the members of the society at its next meeting to the excellent character of the instrument, reasonable price, etc.: "You are entitled to this as a constant advertiser in The Journal." Certainly. The members are entitled to know of a good thing; the dealer is entitled to the help and the support and patronage of the members, for he helps the members by advertising in their journal; and The Journal guarantees the reliability of what he advertises. This is true of all our advertisers and it is our duty, especially at this time, to cooperate with those who cooperate with us. Please do your part to help.—*California State Journal of Medicine.* [A word to the wise is sufficient.—Ed.]

As was to be expected, the "Twilight Sleep" is being exploited by certain medical men who advertise that they are prepared to teach the method to all physicians who desire to learn how to effect a painless childbirth. Very naturally we shall begin to hear of bad results when this treatment has been popularized to the extent anticipated by those who are exploiting it. It is not a new treatment, as it has been tried out by numerous competent and trustworthy obstetricians here in America and declared by the majority of them to be dangerous. With its potentialities for harm it is unfortunate that it should have been heralded to the public through the lay press as being a great boon to the child-bearing woman, and in that manner stimulating its adoption by a great many physicians who under ordinary circumstances would cling to safer methods.

The *Medical Review of Reviews* takes occasion to criticize severely the *Kentucky Medical Journal* for the character of some of its advertising—notably the whisky advertisements. We are disposed to agree with the editor of the *Medical Review of Reviews* when he says that the official organ of the Kentucky Medical Association, which editorially states that it stands for the highest type of medicine and for the promotion of health and sanitary laws, should be in better business than advertising a well-known brand of whisky. Our readers may be interested in knowing that three very profitable contracts from distilling and brewing interests, offered without solicitation, were turned down by the editor of The Journal because he considered such advertising as inimical to the best interests of a journal that tries to be clean and ethical from cover to cover.

Now that the Harrison Anti-Narcotic Law is in effect it will doubtless be exceedingly difficult for the dope fiends to procure their drug supplies. In consequence we look for a more or less general stampede toward institutions that make a specialty of treating drug and alcoholic addictions. We do not say that many general physicians are not prepared to treat these unfortunates in a satisfactory manner, but we do say without fear of successful contradiction that the ethical institutions that make a specialty of this kind of work are the ones that are most likely to treat drug and alcoholic addictions so as to bring about prompt and lasting results. In this connection we call the attention of our readers to a number of institutions of a highly ethical and perfectly responsible character that are advertised in The Journal. These institutions are deserving of consideration in preference to the horde of quack concerns that advertise blatantly in the public press and in not a few of the irresponsible medical journals concerning the treatment and care of the unfortunates who deserve to have consideration at the hands of reputable and conscientious physicians.

For the benefit of those physicians who may have overlooked the provisions of the federal Opium and Coca Law, we repeat the following:

Each physician, dentist, or veterinary surgeon who prescribes or dispenses opium or coca leaves, their salts, derivatives, or preparations, is required,

1. To register with the Internal Revenue Collector of his District, on or before March 1, 1915; to pay a tax of $1 a year (34 cents to June 30, 1915) and obtain his Registry Number, also a supply of special Order Blanks.

2. To prepare on March 1, 1915, and keep on file an Inventory of all such drugs and preparations he has on hand at that date, which must be verified by oath not later than March 5, 1915.

3. To use the special Order Blanks for all such goods as he orders and to keep a duplicate of each order on file for at least two (2) years, accessible to official inspectors.

4. To sign all prescriptions that he writes for these drugs with his full name and his registry number, together with the date as issued and the location of his office, also the name and address of the person for whom such prescription is written.

5. To keep a Record Book of all such drugs dispensed or distributed by him (at his office) showing: (a) the date when dispensed or distributed, (b) the kind of drug and quantity and (c) the name and residence of the patient.

Inasmuch as Uncle Sam is usually uncompromising in dealing with malefactors, our medical friends will serve their best interests if they take the precaution to comply with all of the legal requirements as set forth.

Acting under instructions received from the House of Delegates, the secretary notified all members who were delinquent February first by reason of non-payment of dues. These letters in many instances surprised the recipients, as they seemed to be unaware of the fact that they were delinquent. If this is the case our scheme for keeping dues paid up is deficient because of a weak link in the chain.

It is the duty of the county secretary to notify the members that their dues are payable before January 1. Some time before February 1 the secretary again should notify the members that they will become delinquent after

that date. Subsequently they receive this letter from the state secretary, which should not be a surprise to them, but should simply be an official reminder of the fact that they have failed to heed former notices.

The members should bear in mind that the Association is being conducted for the sum of $2 per member, including The Journal and medical defense, and only the closest economy will allow the dues to remain as they are. All other state associations having a membership the size of ours and with equal privileges have dues from $3 up.

The procrastination of the 500 members who were delinquent February 1 cost the Association about $20 for postage, printing and stationery. Charles N. Combs, Secretary.

Thank fortune the Indiana legislature has adjourned! The usual number of freak bills were introduced, and, as might be expected, a certain amount of vicious legislation passed both houses and has either been signed or is awaiting the signature of the governor. In the matter of appropriations no particular difficulty was encountered in securing money which directly or indirectly becomes profit to a horde of politicians and office seekers. Some of the deserving state institutions had a hard struggle to secure appropriations sufficient for their maintenance, to say nothing of money for their improvement. The State Board of Health was a veritable football to be kicked and pounded to the heart's content of a few pigmy brained, would-be statesmen, who took a special delight in opposing all public health measures because of personal dislike of one or more members of the State Board of Health. Dr. Hurty, whose reputation as a qualified and efficient public health officer is second to none in the country, was made the target for the venting of personal spite by such unbalanced legislators as the notorious Fritzie Feick, whose appearance in the legislature was a sad commentary on the judgment of the voters of DeKalb county, who must have known the unsavory character of the man before he was sent to Indianapolis to represent them in making beneficent laws. It is unfortunate that the whole people have to suffer for the mistakes of a few, and it is a pity that our destructive legislation is not applied strictly and alone to those who are responsible for it. Our educational institutions, which usually fare so badly at the hands of our legislators, should be the pride of every citizen of Indiana, and given the support that they deserve. They can never thrive and be on a par with similar institutions of adjoining states if they are given miserly support. The work of our Board of Health, under the guidance of that indefatigable worker and efficient officer, Dr. Hurty, is a commercial asset which yields large returns aside from all of the humanitarian benefits which accrue to the people. It should be looked on as an enterprise worthy of preservation and expansion rather than one that meets, as at the last session of the Indiana legislature, with petty criticisms and efforts to limit its field of usefulness. We cannot hope for any change until the voters take more interest in the selection of the material that is to be sent to our legislature. Many of the senators and representatives are intelligent, broad-minded, and successful business men who appreciate what it means to have real progress as based on constructive legislation. There are, however, enough of the other type of men in our state legislature to offset the good that could be accomplished at the hands of worthy representatives of the people. These men are usually the worst representatives of a class of men who have been practical failures in life and would not be tolerated in any position of trust in the commercial world. With little or no property interests, no commercial ties, and with blunted conscience, they readily fall in with the machinations of vicious politics, and with little else to occupy their attention they soon secure political positions which they disgrace by their inefficiency. Indiana may be no worse than many other states, and yet when we compare the faults of our own legislature with the faults of some of the legislatures of the surrounding states, we are forced to admit that there must be something wrong with the quality of the timber that we put into our lawmaking body. The time may come when we will awake to the necessity of using better judgment in the selection of our legislative material, and the members of our medical profession along with other intelligent members of society should join in the move to have better representation at Indianapolis.

DEATHS

Milton J. Bolan, M.D., of Peru, died February 4, aged 81 years.

Loyal B. Griffin, M.D., of Greenfield, died very suddenly February 17, aged 56 years.

John G. Nehrbas, M.D., of Indianapolis, died at the Deaconess Hospital, February 21.

W. F. Smith, M.D., of Vincennes, died February 19 at a sanitarium in Evansville, aged 61.

Francis M. Magers, M.D., died February 15, at his home in Churubusco, at the age of 77 years. Dr. Magers was born in Knox County, Ohio, in 1838, and received his medical education at the University of Michigan. He was a member of the Whitley County Medical Society and the Indiana State Medical Association.

Edmund D. Laughlin, M.D., of Orleans, died at the home of his son Dr. C. E. Laughlin at Evansville, Feb. 5, 1915. Dr. Laughlin was born May 28, 1827, was a graduate of Miami and also Bellevue Medical Colleges, and has practiced medicine in Orleans since 1862. He was an honored member of the medical profession and a member of the County and State Medical Association.

Paul E. Trees, M.D., died February 20 at his home in Maxwell following an operation for appendicitis, aged 35 years. He was a graduate of the Indiana University School of Medicine, 1905, member of the Board of Pension Examiners, president of the Hancock County Medical Society and a member of the Indiana State Medical Association.

C. H. Viehe, M.D., died at his home in Evansville, February 1, aged 78 years. Dr. Viehe was born in Westphalia, Germany, in 1837, came to this country at the age of 8 years and located at Freelandsville, Ind. He graduated in medicine in 1876, and has practiced at Evansville for the past twenty-four years. He was a member of the Vanderburg County Medical Society and the Indiana State Medical Association.

DR. THEODORE POTTER

Dr. Theodore Potter was born at Glendale, Ohio, Nov. 29, 1861, and died in Indianapolis, Feb. 8, 1915. Death resulted from chronic pulmonary tuberculosis, complicated by virulent laryngeal involvement. So passed from our midst, in the prime of life, a beloved practitioner and distinguished teacher—perishing of the very disease on which he was an authority and to which, in both prevention and treatment, the best of his life had been given. His going has left a void in the medical life of Indiana, and especially in the Indiana State Medical Association in the sessions of which he has been an active participant for twenty-five years.

He had the good fortune to be well born. His father, the Rev. L. D. Potter, was for years the president of Glendale Female College. Father and son resembled each other, physically, temperamentally, culturally and in their fine qualities of character. Both graduated from Princeton, each winning prize distinction in literature while students at that university.

In 1883 Dr. Potter began his medical work in the Ohio Medical College. He soon became enrapt by the enlightening and stimulating lectures of Prof. James T. Whittaker. The latter had spent several preceding months in Berlin, bringing back stained specimens of tubercle bacilli from Koch's laboratories. Charmed by the eloquence, learning and personality of the great teacher, Dr. Potter sought special work with him and later became assistant to Prof. Whittaker, a distinction accorded but few. A warm and lasting friendship grew up between them. One of the pathetic and cherished memories of Dr. Potter was a visit to the bedside of his dying teacher.

After graduating in medicine, a year's internship, another year abroad under Orth at Göttingen, and Koch and his assistants in Berlin, he was prepared for his life work at Indianapolis where he came in 1889. This training had fired even his conservative nature with euthusiasm for bacteriology in its relation to disease causation. He came into the profession of Indiana boldly proclaiming the truth of the germ theory of disease, logically and confidently demonstrating it. He made cultures of the various pathogenic organisms and showed them under the microscope. At the tinners he had ovens and sterilizers made for they could not be purchased. With these he attended many county society medical meetings, making demonstrations and preaching with great force and clearness the new gospel of the bacterial causation of disease. He inoculated rabbits, and later showed the peritoneum studded with tubercles, convincing the most skeptical, for there were many doubting Thomases. This was but a reflection of the work he was carrying on day by day as professor of bacteriology in the Indiana Medical College. This was Dr. Potter's greatest work. In the history of Indiana medicine no one has rendered a finer service. His papers and reports, published in the transactions of the Indiana State Medical Society during this period, were finally incorporated in a small volume on bacteriology—a

book which did him great credit. It was one of the most concise and clearest expositions of bacteriology published at that time.

Of recent years Dr. Potter has been more widely known in connection with his work on tuberculosis. Most illuminating have been his reports from year to year before the Indiana State Medical Association, setting forth in concise and lucid form a review of the subject; giving the doctrine as it should be preached and laying down the principles which the profession could follow with safety in practice. No less conspicuous has been his service to the public regarding the tuberculosis problem. Only a day or two before his death he said to a friend: "Go forth and preach the gospel of prevention!"

Dr. Theodore Potter

To those who knew him well, Dr. Potter, the man, appealed just as strongly as the physician and scientist. How fully he realized the joy and the need of nature love. "To ramble in the woods, to kick the leaves with your feet, hear the songs of wild birds, the splash of water—to get back close to nature is what we all need to do." These were words he used only a short time before the end. How often he found surcease from the harrassing responsibilities of practice in camp, by brook or lake. When the hand of disease was already on him, he again, at the first opportunity, sought the recreating power of wild nature but it was too late.

We loved him for his tenderness to dumb brutes. All recall his sympathetic consideration for "Polly," the faithful gray mare which served him so long. It was a bunch of green grass, a lump of sugar, a blanket snugly tucked about her on a cold day. No wonder that Polly when she got loose always made straight for home. And later with the advent of the automobile, who has not seen the homely, frowzy "Mike" guarding the machine, to be gently caressed by his master when he returned; and then later see him tenderly caring for "Mike" in his blind old age. And this is the man who believed in and practiced vivisection. Could any man believe that he would be guilty of cruelty?

Dr. Potter was a remarkably clear thinker. He had a logical and irresistible way of driving home points. Sometimes he seemed a little tedious, but nothing could throw him off the track until he had made plain his proposition. This trait made him particularly valuable as a teacher. After he had thought over a subject and had it well in mind, it was with great force and clearness that he expressed a proposition. His diction was faultless. Few could write so well. Had he bent his energies to it, he could have succeeded in literature.

Conviction in his mind meant the attainment of a position after most careful study and deliberation, and he was not easily moved from that view. There was about him nothing of carping criticism, yet he had the courage to face frankly anybody or any question with a candid expression of opinion. His words never had the sting of bitterness but always the marks of honesty.

But of all the qualities in him those which we loved best were his earnestness and fidelity to the truth as he saw it and his loyalty to friends and family. When he had studied any new question in medicine you could rest sure that his conclusions were true and safe to follow.

During his long and painful illness, whenever his doctors found any little symptom of improvement on which they could congratulate him, he would answer with a twinkle in his eye, pointing at his devoted wife: "Yes, I have a good nurse!" For almost a year preceding the final break, illness and deaths in the family brought great bereavement to his wife. His own affliction he had kept secret, not wishing to add new burdens to her sorrow. Thus he suppressed a knowledge of the truth in his own case, until it was too late to effect relief. What finer quality in human nature. In this and in the long and painful struggle he was a hero always. Let us cherish the memory of his character—his fidelity to truth, to friendship and to his own blood and kin.

Frank B. Wynn.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Dr. and Mrs. C. S. Goar have been spending some time at Miami, Fla.

Dr. and Mrs. Paul Thomas Hurt have returned home from a three months' visit in New York.

Dr. H. R. Allen has gone to San Francisco with a party of friends to attend the Exposition. He will be gone about three weeks.

Dr. Henry Jameson was re-elected chairman of the Board of Park Commissioners at their recent meeting. This is the seventh term that Dr. Jameson has served in this capacity.

Dr. J. N. Hurty was recently elected president of the Indiana Water Supply Association. This honor goes to show that whatever Dr. Hurty's standing may be with the politicians it is above par with the scientific men of the state.

At the annual meeting of the Marion County Society for the Prevention of Tuberculosis, Dr. Alfred Henry was elected president. The Indianapolis school board has adopted resolutions that if the parents of forty children in two consecutive grades in any school district petition for an open air school that it will be granted.

The Annual Banquet of the Phi Chi Medical Fraternity was held at the Claypool Hotel, Saturday evening, February 27. There were about sixty members present, among the out-of-town guests being Dr. Turner of Youngstown, Ohio, Dr. Davis of Logansport and Dr. Call of Knightstown, Dr. Ray Newcomb was toastmaster. Speeches were made by Dr. O. G. Pfaff, Dr. Fred Charlton, Dr. Ensminger and Dr. C. D. Humes. An interesting stunt put on by members of the local fraternity was that entitled "Surgical Follies of 1915."

The Indiana Child Welfare Exposition was held in Tomlinson Hall, February 16 to 25. It was attended by tens of thousands of people and was the most pretentious thing ever attempted in the state of Indiana looking toward child welfare. Various exhibits took up the question of housing and homes, schools, interests and ideals of children, their moral and religious life, the benefits of kindergartens and libraries, conservation of vision and teeth was shown, home gardening was illustrated, in fact everything that could be of interest to the child's welfare was shown or demonstrated.

The Scientific Seminar for February was held Friday evening, February 26, a large attendance of the faculty being present. The following program was given: Case Report of Colloid Cancer of Breast, Cancer of Lower Lip, Probably Arising in a Sweat Gland, Cancer of Lacrimal Gland, Mr. George B. Kent. Case Report of Spleno-Myelogenous Leukemia, Dr. Jane Ketcham. Review of the Literature on Benzol Treatment, Dr. M. Joseph Barry. The Relationship of Psychology to General Medicine, Prof. Ernest H. Lindley.

The city board of health has added two more nurses to be used in connection with the medical inspection in the public schools. Five hundred dollars was appropriated by it to be used in paying for the material in dental clinics, $300 for spectacles for poor children and the contract for the Indiana University school of medicine under which the school is to maintain the city dispensary was ratified at $975 a month. The city board of health has also purchased a piece of property opposite the city hospital for $4,000 to be used as a hospital for contagious disease. Four thousand dollars was also appropriated to the pure milk work of the children's aid association for 1915.

At a recent meeting of the Indianapolis Medical Society a resolution was adopted commending Dr. J. N. Hurty, Secretary of the State Board of Health, for his work in behalf of the state, and suggesting a celebration in honor of his nineteenth anniversary as a state officer on March 12. The following committee was in charge of the celebration: Dr. F. B. Wynn, chairman, A. W. Brayton, J. H. Oliver, W. N. Wishard, F. R. Charleton, J. L. Freeland, L. H. Maxwell, Alfred Henry, Ada Schweitzer, T. B. Eastman, Bernays Kennedy, C. D. Humes, David Ross, Miles F. Porter, Fort Wayne; George F. Keiper, LaFayette; M. V. B. Newcomer, Tipton; Edwin Walker, Evansville; Charles S. Bond, Richmond; C. N. Combs, Terre Haute.

The present legislature, up to date, has made a very creditable record on matters pertaining to public health. They have refused to place the office of the Secretary of State

Board of Health in the hands of politicians. They also promptly defeated the bill which proposed to recognize by license chiropractors. The chiropractors had worked up a very formidable lobby in the interest of this bill. It is quite possible that if it had not been for the very active interest of local physicians this bill in some form might have been passed. This experience should teach the medical profession that they must be efficiently organized to meet such movements which are clearly recognized as being detrimental to the public health.

On February 24, Dr. Hurty was elected president of the Indiana Sanitary and Water Supply Association, at its annual meeting in Indianapolis. These deserved honors to Dr. Hurty come at an appropriate time as representative Feick, the legislator, has done what he could to embarrass Dr. Hurty and the State Board of Health. This man Feick introduced an amendment to decrease the appropriation to the State Board of Health by $5,000. It is this same man that introduced a bill to oust Dr. Hurty and to make the secretary of the State Board of Health not an appointee of that board but an appointee of a board in which the governor would be the controlling factor. It is unfortunate that such a man got into the legislature as the following quotation from Feick's speech shows:

"The kind of economy I am for is to take away the money from such departments as these, which are utterly useless, and to give it to these poor devils in the corridors down here," extending his hand toward the lower floor of the statehouse. Feick continued: "What does this man (Dr. Hurty) do? He goes around the state of Indiana telling the farmers of this state that they are dirty. I am in favor of cutting out the whole business."

The legislature has failed to pass or has indefinitely postponed most of the health measures including the Neil eugenic bill and the health officers bill. However, the house has passed a bill abolishing the free lunch counter which Dr. H. E. Barnard, by numerous inspections, has shown usually to be absolutely filthy. The state legislature failed to pass the bill which authorized the licensing of chiropractors.

GENERAL

Dr. J. L. Reck and family of Sheridan, have returned from Fort Bidwell, Cal.

Dr. George V. Cring of Portland, has gone to Boston to take Post-Graduate work.

Mrs. Mary E. Blair, aged 70, widow of Dr. James S. Blair of Lynn, died recently.

Dr. S. C. Newlin of Anderson, has been critically ill at the Long Hospital, Indianapolis.

A ten pound baby girl was born to Dr. and Mrs. William S. Ehrich of Evansville, on February 1.

Dr. H. V. Brown, retired physician of Portland, was stricken with apoplexy on February 28.

Dr. William Palm of Harmony, county commissioner of health of Clay County, has been seriously ill.

Dr. Robert C. Shanklin of South Bend was married on March 1 to Miss Helen M. Gilland of Cheyenne, Wyo.

Dr. Luther Hirt of Brazil, has gone to New York to take Post-Graduate work at Bellevue Hospital and the Post-Graduate Medical School.

Dr. G. F. Holland of Bloomington, has returned home from Birmingham, Ala., where he was called on account of the serious illness of a relative.

Dr. Charles E. Scholl, formerly a practicing physician of Camden, but now retired, has moved to Logansport to spend the latter days of his life.

Dr. P. R. Pierson of New Albany, physician for the public schools of that city, reports that there are thirty cases of trachoma among the schoolchildren.

Dr. G. W. McCaskey of Fort Wayne, who has been spending the winter at Lorraine, Miss., has returned home, and resumed consultation work on March 1.

Dr. and Mrs. S. R. Chancellor of Kokomo, left about the middle of February for Jacksonville, Fla. Mrs. Chancellor will spend the remainder of the winter there.

Dr. C. C. Rayl of Monroe, who went to Texas several weeks ago in search of a location, has been compelled to return home on account of a recurrence of his old sickness.

Mrs. B. P. Dick, wife of Dr. B. P. Dick, of Muncie, died February 22. Just a few hours previous Mrs. Dick's mother, who was visiting in their home, passed away from heart trouble.

Dr. Herbert L. Buckles has opened an office at Hartford City. He is a graduate of Ohio State University (1914) and has had fourteen months of training at the Grant Hospital, Columbus, Ohio.

Dr. and Mrs. W. C. Van Nuys of the Indiana Village for Epileptics, New Castle, were called to Osawotomie, Kan., the middle of February on account of the serious illness of Dr. Van Nuys' father.

Dr. N. D. Berry has resigned as secretary of the Muncie Board of Health because the duties interfere with his private practice. He will retain his membership on the board. Dr. G. Clarence Rea will serve as secretary.

The Medical Association of the state of Washington has organized a medical defense feature for the benefit of its members. Since the industrial insurance law went into effect, malpractice suits have increased 80 per cent.

Dr. Clark J. Stevens has been elected superintendent of the Tuberculosis Hospital at Rockville, Ind., to take the place of Dr. Gekler, who resigned recently to take a position in Chicago. There were 106 applicants for the position.

On February 20 Dr. Carl M. Sautter, formerly of Logansport, Ind., and Miss Hazel G. Underwood of Noblesville, Ind., were married in New York City where the bridegroom is now practicing surgery of the eye, ear, nose and throat.

Dr. C. V. Smith has located at Tipton for the practice of medicine and surgery. He is a graduate of the University of Illinois, spent six months in St. Mary's Hospital, Chicago, and was for one year intern at the City Hospital at St. Louis.

The H. K. Mulford Company are sending out copies of the Harrison Bill together with a list of preparations of their manufacture that are affected by said bill. Copies of this bill and list will be sent to our readers, no charge, on application to the H. K. Mulford Company, Philadelphia, Pa.

The American Gynecological Association held their annual session at St. Louis, Mo., January 29 and 30. The meeting place for 1916 was not definitely decided on, but will probably be held at New Orleans unless the European war should end. In that event they will undoubtedly go abroad.

It is reported that the food supply of Germany is seriously threatened by the prevalence of the foot and mouth disease in that country. Dr. Kristein of the Bacteriological Institute of Berlin claims to have discovered that the pathogenic agent is a protozoon, and if this is correct the disease will probably yield to emetin.

The sum of $100,000 has been set aside by Harvard University to aid Belgian professors who have been driven from their land by warfare. Two of the faculty of Louvain University will come to Cambridge at the beginning of the next college year to take charge of courses at Harvard, and they will be paid for their work from this special fund.

The Modern Hospital Publishing Company have purchased *The International Hospital Record,* which for eighteen years has been published by the Sutton Publishing Company of Detroit. This journal has been merged with *The Modern Hospital,* a monthly magazine devoted to the building, equipment and management of hospitals, sanitariums, etc.

Drs. William J. and Charles H. Mayo of Rochester, Minn., have submitted plans for the establishment of a $1,000,000 foundation for medical research in connection with the University of Minnesota. The plan, under certain restrictions, has been approved by the faculty of the university and is now under consideration by the University Medical College Advisory Board.

Dr. H. J. Pierce, formerly of Cloverdale, has taken offices in connection with Drs. J. H. Weinstein (gynecology and abdominal surgery), R. L. Woodard (general surgery), and Charles N. Combs (anesthesia), at Terre Haute. These doctors are working out the group plan in studying cases together instead of individually. Dr. Pierce has installed a complete equipment for Roentgen ray and fluoroscopic work in the Union Hospital and now fills the place of roentgenologist to that institution.

The Sullivan County Medical Society have recently issued their Annual Program Calendar for 1915. This calendar contains the pictures of the first four presidents of the Sullivan County Medical Society; a list of the officers for the present year; a list of their membership; the program for the year 1915, and the motto "Every man a good fellow — every man a friend."

Fifteen licenses were granted by the State Board of Medical Examination and Registration on February 3. Dr. John W. Sluss and Dr. G. J. Bergener of Indianapolis who had been practicing under licenses granted on their diplomas, received examination licenses and will leave soon for France to join the hospital corps in the French army. Others receiving licenses were: Russell O. Horton, S. P. Burns, W. H. Burton, H. S. Cook, F. L. Darrow, B. F. Deer, Rudolph Dunweg, Wardlaw Ewell, W. S. Grow, B. R. Kirklin, L. B. Robertson, R. M. Walden and A. L. Walters.

The forty-second annual meeting of the National Conference of Charities and Correction will be held at Baltimore, Md., May 12 to 19, 1915. A very interesting program has been arranged, and the subject of "Health" will be under the chairmanship of Dr. Richard C. Cabot, of Boston. This will include a series of discussions on the social responsibility of the hospital and practical methods of social work in connection with hospitals. Dr. Charles P. Emerson, dean of Indiana University Medical School will be one of the speakers on the "Health" program.

Dr. George F. Butler, who is meeting with gratifying success in making a high class medical institution of Mudlavia, has opened a Chicago office at 1451 Peoples Gas Building, 122 S. Michigan Ave. He will be at that office on the first and third Saturdays of each month, from 2 to 4 p. m., for free consultation with those who wish to present their cases or who desire special information concerning the Mudlavia Treatment. Appointment may be made in advance by addressing Dr. George F. Butler, Medical Director Mudlavia, Kramer, Ind.

At a recent meeting of the Rock Island (Ill.) County Medical Society the following resolution was passed: "Any physician who has been a member of this society for ten consecutive years, immediately past, and who has reached the age of 70 years, and who continues to reside within the state of Illinois, may, at his request, be elected a life member on a three-fourths vote of members present and voting at any regular meeting of the society. A life member shall be accorded participation in all scientific and social work of the society, but shall have no voice in the business management and shall pay no dues."

As we go to press we are favored with the program for the complimentary banquet tendered to Dr. J. N. Hurty, on the evening of Saturday, March 13, in commemoration of his twenty years of service as secretary of the Indiana State Board of Health. The banquet was held in the Henry IV room at the Claypool Hotel, beginning at 6:30 o'clock. A general invitation was extended to members of the medical profession, as also to the laity, to attend the dinner.

Toastmaster.....Governor S. L. Ralston

"The Well Born Child and the State".....
.....Dr. Victor C. Vaughan
President American Medical Association, Ann Arbor, Mich.

"Vital Statistics".....Dr. G. H. Simmons
Editor Journal of American Medical Association, Chicago.

"The Turbulent Life of a Health Officer".....
.....Dr. W. A. Evans
Former Health Commissioner, Chicago.

"Health a Greatest Asset of Life"...Dr. W. E. Stone
President of Purdue University, Lafayette, Ind.

"The State Federation of Health Officer's Work"
.....Miss Vida Newsom
President of Indiana Federation of Women's Clubs, Columbus, Ind.

"Public Schools and Public Health".....
.....Dr. William Lowe Bryan
President Indiana University, Bloomington, Ind.

"The Educational Work of the Health Officer's School".....Dr. G. T. MacCoy
Ex-President Indiana State Board of Health, Columbus, Ind.

"An Original Poem".....Dr. F. C. Heath
Indianapolis.

Announcement has just been made of the opening of a laboratory of surgical research in Chicago. The management announce that in connection with original research work on the part of the regular staff, private and class in-

struction will be given to surgeons desiring to perfect their technic.

The program seems very interesting and as the personnel of the instructors is high, the work should be of considerable value.

The institution will be known as the Chicago Surgical Research Laboratory and a downtown office has been established at 327 S. LaSalle St., Chicago.

This institution, which is not to be conducted for profit, should prove a valuable addition to the several excellent post-graduate schools in Chicago. An announcement of the program and purposes of the laboratory appears in another section of this journal.

CORRESPONDENCE

IPECAC TREATMENT OF PNEUMONIA

Terre Haute, Ind., March 7, 1915.

To the Editor:—The use of ipecac in the treatment of pneumonia probably dates back to the first uses of the drug as a component part of empirical mixtures used as routine treatment of the disease. So far as the writer knows this drug has not been applied to the treatment of acute infectious diseases of the respiratory tract in an heroic and systematic way, as it has to those of the digestive system, although the respiratory tract and digestive system are interrelated anatomically, physiologically and pathologically. Knowing the almost futility of recognized treatment of the disease with drugs, the writer decided to try, in a rational way, in what may be called "Dysentery of the Lungs" (pneumonia, etc.) the use of ipecac. In the face of a 90 per cent. mortality with other methods and combinations of treatment, something new might meet the emergency. Therefore, with the next batch of cases I commenced with a purgative dose of calomel followed in four hours by castor oil or magnesium sulphate. After the bowels were thoroughly emptied I commenced with codein sulphate and powdered ipecac. To an adult for the first twenty-four hours I give ipecac 2 grains, and codein ½ grain every two hours. The codein quiets the pain and lessens or prevents the nausea of the ipecac. If the disease is sthenic and not ushered in by repeated vomiting, showing severe central nervous symptoms, I add to each dose of the above 2 drops tincture Aconite root. If there is much vomiting or pain or both I immediately give hypodermically 1 grain codein. During the second twenty-four hours I give 5 grains of ipecac and ¼ to ½ grain codein owing to the pain and nausea, every two hours, and omit the aconite. By the end of the first forty-eight hours the skin moistens, the cough loosens, and moist râles appear in the lungs; the pulse lessens in tension and rate and increases in volume, and the temperature falls two or three degrees. The whole aspect of the patient changes for the better. But, if the desired improvement is not apparent the ipecac is increased to 7½ grains every two hours with codein ½ grain and citrate caffein 1 grain. By this time a tolerance so to speak, has been obtained for the ipecac. Its action on the digestive tract becomes apparent in free movements of the bowels, not liquid and exhaustive, but of a salutary nature. I have not found it necessary to go beyond this last amount. The codein (or opium in some form) may be varied to suit the circumstances and condition of the patient. Of course the amount of either or both drugs must be varied with the very young and very old, as both bear opium badly but bear ipecac well.

Since using the above method I have had satisfactory results and I submit this note to the profession in the hope that the treatment will be thoroughly tried as the season of the year makes it opportune.

E. L. Larkins, M.D.

THE NEED FOR BETTER OBSTETRICS

Argos, Ind., Feb. 26, 1915.

To the Editor:—In the February issue of The Journal Dr. H. D. Fair of Muncie has a paper on "Better Obstetrics" which is worthy of publication and much needed by the profession, although those in most need of such education rarely if ever read a medical journal.

A year ago I changed to my present location, and some of these "new fangled" ideas were looked on with suspicion by the laity and as not necessary by some of the profession in my new home. I handled ten cases of my own and two infected cases of other doctors without an accident by following a method similar to the one outlined by Dr. Fair with the exception that in addition to carrying everything needed, put up in sterilized separate packages, I carry a sterile pair of leggings and a short hospital gown opening in the back. After such a good record a number of preg-

nant women engaged me and I had just begun to feel that my obstetrical work would soon be a large part of my practice, when suddenly two cases changed to another doctor a few days before delivery; also three others that expected to be confined shortly.

On investigation I found that a tale was being circulated far and wide that I had done the awful and unheard of deed of having shaved one woman and cut the hair away on others in confinement. Also, that I wore gloves, made my patients wear tights and would not permit the patient to be covered with bed clothes while she was having her baby. The story was so told, elaborated and distorted, that I felt it necessary in protection to myself to stop such tales, and if the guilty party could be located to bring action against her. After consulting an attorney I wrote letters to the chief neighborhood gossipers telling them the untruth of the statements and warning them to stop. This immediately brought out the chief source from which it all came, and you may imagine my feeling when I discovered the guilty one to be a member of our own profession and a member of the Marshall County Medical Society.

One question I would like to ask the medical men. Would it be a reflection on the profession at large for one doctor to take legal action against another who is trying to gain practice by slander? From one viewpoint the medical defense fund of our state medical association is a grand thing, but when we see the obsolete methods still used and argued for to-day, such as never cleaning up a mother; unclean hands without gloves, delivering a baby under dirty bedding into a lot of amniotic fluid, blood, and filth, soaked up with old rags that are fit for no other use, never examining the genitals, breast or baby, then blaming the mother or babe for "catching cold" when things go wrong, it seems to me we had better start a propaganda of reform in our ranks as well as in other lines. I do not believe that when ignorant practitioners persist in such methods that we should protect them as we are doing with your dollar and mine.

Because of the fact that we spend more money on hogs in Indiana than on public health is no sign that we should try and imitate hog delivery.

These are my sentiments for publication if you like for I would like to know whether I am with or against the medical men of my state.

Fraternally yours,

Frank H. Kelly, M.D.

THE VIGO COUNTY MEDICAL SOCIETY

Terre Haute, Ind., Feb. 27, 1915.

To the Editor:—I desire to thank you for the way you published our January communication and hope we will be able to do the Vigo County Medical Society some good, at least to stimulate enough interest to insure good attendance. You know the old saying that some members never attend any kind of a society except when there is a prospect of a feast or a fight. Now that we have a monthly feast down on the program and no one carrying a chip on his shoulder we hope to have a record attendance this year.

The luncheon meeting of February 2 was held in the Elks' Club rooms from 12:30 to 2 p. m. As a first get-together-social affair it was a decided success. There was a large attendance.

After luncheon Dr. Mitchell read a carefully prepared paper on the diagnosis of pneumonia. This was followed by Dr. Charles N. Combs who gave a few minutes' discussion of the treatment of the disease. The speaker emphasized the fact that there was precious little effective treatment, and no better results are obtained now than were obtained fifty years ago. He said treatment really resolved itself into management of the case in ventilation, hygiene of patient, diet, etc.

Owing to the lateness of the hour there was no further discussion and the society adjourned. By way of information I may add that we have had an unusual number of cases of pneumonia here this winter, and to the best of my knowledge about 75 per cent. were fatal. I have not been able to find that post-operative pneumonia has been more prevalent than usual. So far as I know every patient above 65 years of age has died.

At the meeting of February 9 the society was entertained by an interesting paper by Dr. Johnson on the subject of "Dietetics in Diabetes." Much as has been said and written about this disease, its etiology remains obscure, its treatment nil, and its results certain. The only good that comes to these patients is through proper hygiene and diet. The course outlined by Dr. Johnson followed the customary routine and—all roads lead to Rome.

February 16 a paper by Dr. Bopp on "High Vagus Tonus and Its Relation to Internal Diseases." It was a masterful presentation of the subject and was discussed by several members.

February 23 was an eventful meeting. We had as our distinguished guest Dr. Babcock of Chicago whom perhaps every physician in Indiana knows in some way. This is the second time that Dr. Babcock has honored us by his presence and instructed us by his wonderfully clear lectures. His subject was "Streptococcus Endocarditis," in which he showed a master hand in knowledge of the etiology, mode of infection, pathological results and treatment. In detailing its etiology he followed closely the experiments of Rosenau with the different strains of the streptococcus showing changes from one strain and another, and the different disease due to the different strains—among them being pneumonia and probably scarlet fever. It is evident that through the experiments of Rosenau, confirmed by other bacteriologists and pathologists, we must unlearn and then study again many things in the etiology of bacterial diseases. Dr. Babcock is a grand man and physician. As I sat listening to his clear cut description of the disease, with almost painful silence prevading the room, my thoughts went back to student days when I loved the hour or more listening to that astute clinician and prince of teachers, Prof. Robert N. Todd. He was a grand man, noble physician, gentleman and friend. In my mind's eye I could see him on the rostrum, his face expressing high enthusiasm, and leaning his elbow on the desk, looking over his glasses and pointing his finger ominously at the audience, emphasizing the three essential points in the differential diagnosis of disease of the parenchyma of the lung, inspiration, expiration, and absence of the respiratory murmur.

A Member.

SOCIETY PROCEEDINGS

INDIANAPOLIS MEDICAL SOCIETY

Meeting of January 19 — Hotel Washington

Meeting called to order by president. Application of H. E. Barnard for associate membership was read first time. Drs. G. B. Jones and Wm. Mellinger were elected to membership.

Dr. Charles R. Sowder read the following: In the death of Dr. Allison Maxwell our society has sustained the loss of one of its most honored and beloved members, the profession at large one of its truly eminent men and the public one of its most useful and valued citizens.

We esteemed Dr. Maxwell, not alone for his eminent attainments in medicine, but for those virtues so well blended in him that go to make the truly great man. Thorough and sincere in whatever he did, gentle in manner, chaste in speech, charitable in judgment, with malice toward none, he has lived amongst us, loved and revered by his friends and respected by all. His memory shall be to us an inspiration to nobler and better things.

E. F. Hodges,
J. O. Stillson,
Chas. R. Sowder, Com.

Motion carried to spread same on minutes of society and send a copy to the bereaved family.

Program: "A Review of the Treatment of Syphilis in Foreign Clinics," Dr. A. W. Brayton.

Dr. A. W. Brayton gave a report on methods of treating various stages of syphilis, primary, secondary, late lesions and nervous syphilis, including tabes and paresis in clinics of Germany, Switzerland, France and England, and also in the City Hospital of New York, under direction of Dr. John A. Fordyce.

Dr. Brayton's report was based on current literature of the period which included discovery of the specific organism; application of Wassermann reaction; inoculation of lower animals with syphilitic virus; culture of organism of syphilis in vitro; discovery of salvarsan; intravenous medication; the luetin test; pathology of spinal fluid, and intraspinous medication, subsequent to localization of organism in brain and cord. His report was based mainly on personal observations made in July and August of the recent year by Dr. Fordyce as reported in the *Journal of the American Dermatological Association* of November, 1914, and in personal letters of Dr. Fordyce to Dr. Brayton. The most general treatment of primary and secondary forms is by combined use of salvarsan and mercury. Only Wechselman, who has given 50,000 injections of salvarsan in Rudolph Virchow Hospital in Berlin, depends in early and secondary syphilis on salvarsan alone. He seldom gives mercury as he considers salvarsan more efficient; he gives full dose of old salvarsan and controls all his cases by frequent Wassermanns and spinal puncture. On the continent most use the salvarsan and no single clinician regards the drug as dangerous. Citron says "Fear of salvarsan is not justified when compared with results of syphilis." Deaths from salvarsan, he concludes, "are almost a myth of past years." Personally, Dr. Fordyce in ordinary cases, early and secondary, or even in late syphilis with lesions gives from two to six salvarsans — as patient is able to purchase — and follows with intramuscular injections of salicylate of mercury in albolin, giving from one to two or three grains each week or ten days depending on tolerance of patient. He regards it a mistake to limit dose to one grain a week for adult patients. That, is Dr. Fordyce does not trifle with syphilis, but believes, as we all should, that early and persistent intensive treatment in the first stages may sterilize them permanently, and that in any case such treatment will prevent ravages of interior and nervous syphilis. Dr. Brayton's paper included other features of dermatological interest which he expounded without reference to treatment of syphilis, as described in his report.

"The Toxemias of Pregnancy," Dr. C. E. Ferguson. Systemic disturbances due to presence of products of conception make every case of pregnancy one of potential disease. While our knowledge of the eti-

ology of toxemias of pregnancy is most unsatisfactory, there is a good reason to believe that we are on the eve of important discoveries. Fetal elements enter maternal blood and by autolysis produce primary lesions in liver; kidney lesions are late and are result of failure of liver to perform its normal function. Pre-natal care of mother and child is most important. Routine examination of urine in all cases should not be neglected. Patients should report at once every persistent headache, disturbance of urine, or epigastric pain. It is important to distinguish various types of vomiting that simulate toxic variety. Neurotic and reflex vomiting of pregnancy generally yield to treatment, but chronic and acute type of pernicious vomiting call for early evacuation of uterus. Pre-eclamptic toxemia demands most vigilant treatment. Patient must be put to bed, free from all noise and friends; diet as nearly as possible confined to milk. If symptoms do not improve we must empty uterus. Improvement under prophylaxis does not guarantee immunity from eclampsia. In a small number of cases eclampsia develops without any warning. In the treatment of eclampsia authorities are divided into three classes. One advocates immediate emptying of uterus in every case, another conservation treatment by morphia and elimination, while the third advises conservation treatment until it is evident that improvement is impossible. Dogmatism has no place in treatment. Every case must be studied on its own merits. A primipara with a rigid cervix, who shows no signs of improvement under conservative treatment will demand a section, while another with a soft cervix and labor progressing, will require timely application of forceps, or version as indicated to hasten delivery. Conservative treatment is justified in all cases where blood pressure is not high and where patient returns to consciousness between spasms.

DISCUSSION

Dr. Burckhardt: Regarding eclampsia, would call attention to similarity of pre-eclamptic stage and narcosis of scopolamin. Dilating cervix will enable one to differentiate. In eclampsia there is no need for haste, but uterus should be emptied. There should be a cesarean section outfit in bag of obstetrician. Prenatal care reduces eclampsia. Cited service of City Dispensary to bear this out. Vomiting in pregnancy can be relieved very materially by keeping patient in bed late in morning, arising gradually. Also administration of veronal at bedtime. Patients sleeping well awake without nausea. After delivery there will be no toxemia if there is no placental tissue remaining.

Dr. Fletcher Hodges: Edgar's definition of toxemia of pregnancy, viz: "a state of blood and metabolism arising from hepatic insufficiency to which pregnant woman is strongly predisposed," was quoted. The placenta is a broad field for study. Ferments from it are fatal to lower animals. So far as historical data is concerned toxemia of pregnancy dates back to 28 A. D. Gentle dilatation helps vomiting in pregnancy. Urine should be watched very carefully. When life of mother or child is at stake save mother. Cited a case of eclampsia with all symptoms including low blood pressure and subnormal temperature followed by coma. Spinal fluid showed diplococcus of meningitis.

Meeting adjourned. Alfred Henry, Sec.-Treas.

Meeting of January 26 — City Hospital

Attendance 70. After reading of minutes Dr. Cregor moved that secretary be instructed to mail a copy of adopted resolutions pertaining to a chiropractor bill to each member of house and senate. Carried.

Program: Dr. A. C. Kimberlin presented a case of hyperthyroidism for diagnostic study. Case had many symptoms of a typical case. The same care was advocated as in more pronounced cases in order that favorable results might be obtained. Medical or surgical attention either might be followed. Rest of mind and body essential thing. Many types of the disease were cited and elaborated.

Second case was that of a woman aged 60, who had had several attacks of supposed pneumonia which really were pneumonitis with emphysema. Methods and results of percussion and auscultation were shown by demonstration. Amphoric breathing was confirmed by Roentgen ray by Dr. Egart.

Dr. Neu showed two cases: Case 1. Man 55 years of age, laborer by occupation, married, who reports using considerable alcohol in years gone by, but denies any syphilitic infection. Otherwise personal and family history negative. Because of mental dulness it has been difficult to elicit any detailed history, and this also has made it difficult to determine disturbance of various sensory functions. Physical examination shows him to be rather poorly nourished. He has unequal pupils; right being wider and responding both to light and accommodation; left being smaller, rather contracted, and not responding to light, but does slightly to accommodation. Tendon reflexes unequal, being more marked on right side, particularly as regards patellar and Achilles reflexes. There is some limping in walking, with a tendency to drag right foot. He reports that six weeks prior to admission he was suddenly paralyzed, with his speech somewhat involved, from both of which he recovered in about three weeks, since which time present condition has existed. Urinary examination negative; no abnormal condition of thoracic and abdominal viscera could be ascertained, and blood pressure was within normal limits. Wassermann examination of blood gave a positive reaction with 1 c.c. of serum, but not with smaller amounts. First lumbar puncture was reported dry. Second puncture, made about two weeks later, gave a cell count of 100, with a positive Wassermann. This case represents pretty typically a type of syphilitic involvement of nervous system, in which cerebral symptoms are predominant. Pathological condition undoubtedly is of vascular origin, being essentially a syphilitic endarteritis.

Case 2. Man 34 years af age, railroader, family and personal history negative. He reports that in 1908 he was thrown from a car, injuring his back, from which he apparently recovered complete use, but was followed by some numbness on anterior surface of both legs. Three years later he contracted a syphilitic infection, for which he took one injection of salvarsan intravenously, following this by mercury tablets by mouth for a year. At various intervals since then he has taken different treatments. In April, 1914, he began to feel a numbness and tingling in his feet and legs, accompanied by a sense of weakness and some difficulty in controlling bladder. Condition gradually grew worse, compelling him to cease work

in October. Since that time legs gradually have grown stiffer and the voluntary control gradually has increased. Physical examination discloses a spastic condition of legs with exaggeration of tendon reflexes, bilateral ankle clonus and bilateral Babinski toe phenomena. There is some paresthesia and some impairment of the sphincters. Blood examination gave a positive Wassermann. Cerebrospinal fluid has not as yet been reported on. This case represents a type of nervous syphilis involving predominately the spinal cord, which first was described fully by Erb as syphilitic spastic paraplegia. While it is not uncommon to have a lighting-up of a latent syphilis of nervous system following injury, it would be of interest to know whether injury to spine and cord at time of his accident had predisposed in any way to the focalizing of syphilitic process in the cord in this patient.

Dr. S. E. Earp reported two cases: Case 1. Patient admitted to hospital Jan. 1, 1915. Female, aged 17, giving a history of tonsilitis and rheumatism, cough and expectoration of a pink tinged mucus, pain in the lumbar region and on pressure deep pain in right chest. In the same region complained of heavy sensation and pain when in left lateral position. Liver extended three inches below right costal margin. Cardiac hypertrophy and mitral regurgitation. Temperature normal, blood pressure systolic 102, diastolic 65; negative urine and Wassermann test. In speaking of this case as one of passive congestion of liver, local causes were mentioned such as pressure in portal area, thrombosis and phlebitis, and among general points in etiology emphysema and cirrhosis of lung and pressure by intrathoracic tumors. In this patient passive congestion of liver was attributed to valvular heart disease. The treatment consisted of light diet, absolute rest and freedom of bowels by use of salines. The drugs used in treatment were sodium bicarbonate, tincture of digitalis and sparteine sulphate. At this time patient has no pain or tenderness, liver is normal in size, heart compensation good but a mitral murmur can be heard.

Case 2. Patient entered hospital with diagnosis of appendicitis on account of a circumscribed pain in region of the appendix. However, when admitted to the ward a physical examination showed a lobar pneumonia involving entire right lung. Speaker called attention to this as an occasional error and outlined differentiation necessary to avoid a mistake. Convalescence of this patient was slow and there was lysis rather than crisis as is usual in lobar pneumonia. With the thought of a possible tuberculosis five examinations for tubercle bacilli were made but with negative results. The causes were given why an interstitial pneumonia with formation of intra-alveolar connective tissue sometimes follows acute lobar pneumonia and it was suggested that that was the possible future of this patient. There should be a watchfulness for tuberculosis. Dr. Thomas L. Sullivan, the new superintendent, served refreshments.

Meeting adjourned. Alfred Henry, Secretary.

Meeting of Feb. 2, 1915, Hotel Washington

After reading minutes of previous meeting secretary read a letter from committee in charge of American Fund for Belgian Physicians thanking local society for contribution of $25.

Program consisted of a paper by Dr. Charles P. Emerson on "Mental Reactions in Organic Diseases."

The ability to react to stimuli is the test of life. The study of reactions gives us our best information concerning life of lower organisms, as well as of function of our own organs. The evidence we have of disease is the evidence of reactions; the body is attacked by an organism and defends itself. Those phenomena which we call symptoms are more often evidence of defense than of attack. Since symptoms are so often protective in character, symptomatic treatment is likely to be more harmful than beneficial. In case of neuroses many of the symptoms of so-called "neurasthenic conditions" are first protective in character until the conditions arouse the emotions, and then we have development of an injurious fatigue. In care of patients suffering from neurasthenia, psychasthenia, hysteria and mild insanities, these evidences of protection are to be assisted rather than combatted. The importance of eye-strain, nasal trouble, chronic infections and latent diseases in production of the so-called neurasthenic state was emphasized and lastly the importance that the physician meet the mental problem in each case by proper psychotherapy. Formerly patients knew little of disease and preferred to leave all to the doctor, but now the advances in preventive medicine, and the extensive literature in popular medicine have stimulated their great interest in their health and have aroused their emotions of fear and apprehension so that in any given case the symptoms due to the disease itself are relatively less painful to the patient than those due to the fears and worries aroused by the disease. It is therefore important in treatment of patient to meet not only underlying diseases, but those more evident superimposed neurasthenic conditions, if we are to maintain confidence of patient.

DISCUSSION

Dr. Cottingham: I have nothing but approval of Dr. Emerson's paper. The idea that these nervous phenomena are protective symptoms when first manifested is true and cause should be removed. These nervous symptoms may be fatigue, neurasthenia or hysteria in those mentally normal. The exhaustion psychoses, the manic depressant or exaltant, the infectious and post infectious psychoses are examples of phenomena which may have resulted from causes no more pronounced than were the causes of the fatigue or neurasthenia in those mentally of stronger fiber. The symptoms may have been protective phenomena at the onset but now they are more than that, they are habit. Epilepsy may be protective phenomena at onset but when convulsions have continued too long the cause may be removed and convulsions continue throughout life as a habit. To these phenomena of neurasthenia and hysteria may be protective symptoms at the onset but continued too long they become firmly fixed and become the disease itself after the cause has been removed. These protective phenomena may produce a degree of exhaustion which is of such gravity as to make restoration impossible. They may in themselves become the vicious factors producing insomnia and resultant exhaustion as evidenced in profound neurasthenic or in many insane conditions.

Dr. A. E. Sterne: To me every case is a law unto itself, to be judged wholly from standpoint of patient, of physical condition he shows, of his particular viewpoint in regard to his condition and of premises from which his viewpoint had been developed. In other words there is always an objective and a subjective side to a problem. I seek always to view each individual case from two sides. First from my own as his medical adviser, and second from the response he shows in his mental attitude toward the impression which he has himself derived from his condition as he conceives it to be. The mental responses, or reactions, which individuals show toward any given impression are largely, if not wholly, from side of psychic sense. Particularly is this true in field of emotions and of all emotions the most fundamental is that of fear in some form, not fear necessarily in its limited sense, but rather in its limitless. Analyzed to finest point, practically every emotion will be found to have an underlying element of fear within greater or minor limits. It is fundamentally through fear that a recognition of the highest power of the Lord Almighty is conveyed to us human beings. Applied to the individual case, the emotions of fear are apt to take the most important place in any given problem which presents itself. A worry is fundamentally a fear in some form and mental reactions which patients show are clearly presented by emotions of fear often, very often indeed not recognized by patient as being of this character at all. Therefore, in the handling and treatment of such concrete cases, it is necessary that physician carefully analyze patient's condition and recognize those elements at their true value, which patient either fails to recognize or to which he ascribes wholly fictitious valuations. It is on this account that the wise and comprehending physician attains results which would otherwise be beyond his reach. In this day and age we must recognize psychogenics in their influence in the protection and influence of actual disease whether directly or through their inhibitory influence on functions of nerve cells or indirectly through autonomic nervous system and poliglandular apparatus. This recognition of psychogenic factors brings us into close touch with many so-called non-medical practices of healing, cloaked more or less with a mantle of religion, but all of these make an appeal to credulity, superstition and belief which true science should never make, but which nevertheless have exercised a tremendous influence, particularly in this country. For the sake of humanity, even for the sake of the future of the medical profession itself, it is absolutely essential that physicians clearly comprehend the significance of such psychogenic factors and deal with them wisely and intelligently else the inevitable must occur and others than physicians, less capable in wielding well directed influences will do so in their stead.

Dr. Brayton: In the question under discussion we should not take as final the word of a man of study and large experience. Lines of research and medical practice are about as high as science and psychology have attained and are as fine a presentation of the relation of mind and body as can be found. Let the doctor read Plato and Shakespeare. They spoke of reverence for all things that have life. Whatever tradition we may lean to we can not get away from the great tradition that there is something above us—that we are above something. We should strive to create more happiness in those around us. A constant reminder of those around us makes us unselfish. I never knew a scientist or sportsman who was a bad man. Our attitude toward our patient and family should be such that they are always glad to see us.

Attendance ninety. Meeting adjourned.

Alfred Henry, Secretary.

Meeting of Feb. 9, 1915, German House

Following were elected to membership: Drs. Fred C. Warfel, Walter F. Hickman, Edwin C. Thomas and J. Don Miller. Refreshments were served. Attendance 140.

Dr. J. T. Geraghty, Associate Professor of Genito-Urinary Diseases, Johns Hopkins University, read a paper on "Present Status of Renal Function Tests." Rowntree and Geraghty in 1910 proposed the phenolsulphonephthalein kidney function test which has become more widely used than any previously suggested test.

Dr. Geraghty discussed renal function tests of value in conditions where urinalysis is insufficient including total function tests, relative function tests; tests for urine content of urea, and blood and urine cryoscopy.

Phenolsulphonephthalein is eliminated wholly by kidney and its excretion is parallel with that of urea.

The technic of the test consists in injecting subcutaneously, intramuscularly or intravenously 6 mg. of phenolsulphonephthalein and noting time elapsing from injection to appearance of a pinkish color as the urine from a retained catheter drops into a test tube containing a few drops of a 25 per cent. solution of sodium hydroxid. Urine is then collected at end of first hour and at end of second hour. Total quantity for each hour is alkalinized with sodium hydrate and diluted to one liter, and a few cubic centimeters are filtered, reading made and percentage of drug excreted calculated by means of a colorimeter.

Normally the time of appearance varies from five to eleven minutes and 40 to 60 per cent. is excreted in first hour, and from 15 to 25 per cent. second hour making a total of 55 to 85 per cent. excreted in two hours.

The excretion is not proportionate to excretion of water. Dr. Geraghty advises that patient drink 200 to 300 c.c. of water just before test is begun.

In many instances the percentage of excretion of dye is high when amount of urine is small. Also quantity of urine may be large and excretion of dye small.

In comparison with lactose test it was shown that lactose test is valuable in mild nephritis where phenolsulphonephthalein test may show normal excretion. Lactose is excreted in from four to six hours normally, and from eight to ten hours pathologically, and 75 to 80 per cent. may be recovered. In severe nephritis it may be excreted in a few hours showing the unreliability of the test.

Dr. Geraghty laid stress on the importance of determining urea retention in connection with renal

function. The older tests for blood urea by means of Doremus apparatus and blood cryoscopy have been supplanted by the method of Marshal using soy bean extract which test is much simpler and more reliable. Blood urea is indicative of urea content in all tissues. Normal content is from 300 to 400 mg. per liter.

The value of phthalein test is of importance first, in surgical diseases of kidney, and second, obstruction to lower urinary tract in determining amount of renal damage and a measure of improvement of renal functional activity from preparatory treatment.

The total functional activity of the two kidneys may be estimated, also relative capacity of kidneys separately by collecting urine by ureteral catheterization. The combined results equal the total estimation made previously.

In nephrectomy the value of the better kidney may be determined.

In diagnosis infantile kidney may be presumed when appearance time is normal but total output small. In differentiation of pyelitis from pyelonephritis the test is of value.

In surgical cases the test has made it possible to select a time for operation when kidneys have regained their full functional power.

Meeting of Feb. 16, 1915, Hotel Washington

Dr. F. W. Foxworthy announced annual meeting of Medical Section of the American Life Convention, to be held at French Lick, March 3 to 5.

PROGRAM

Paper: "Chyle Cysts of the Abdomen." Presentation of Pathological Specimen. Dr. Murray H. Hadley.

It has been estimated that about 200 of these curious tumors could be collected from literature, but it is probable that a much larger number has been found and remain unreported. Case herewith reported occurred in a man 48 years old, who until time of appearance of tumor had enjoyed good health. About one and one-half years before operation, he became aware of a mass in upper left quadrant of abdomen. This mass increased rather rapidly in size, so that in six months time he was thought to be suffering from an ascites. He was tapped a number of times and a fluid, whitish in color, withdrawn the first time. At subsequent aspirations fluid became "chicken fat" in color and later bloody. When examined prior to operation he had a symmetrically enlarged abdomen extending from thorax to symphysis. He was thought to be suffering from encysted tuberculous peritonitis or hepatic cirrhosis with ascites. Operation revealed an enormous cystic tumor, entirely filling the greatly distended abdominal cavity retro-peritoneal in location. Its base covered an area as large as hand, to left of root of mesentery. After aspiration it was removed without difficulty. Abdomen closed without drainage. Recovery uneventful until tenth day following a few hours of upright posture in bed, patient began to vomit, and rapidly developed symptoms of superior mesenteric ileus from which he died. The location and microscopical structure of wall of this cyst seemed to indicate a tumor of different character and origin to the mesenteric chyle cyst. Cyst wall was composed of a non-cellular fibrous tissue and was not lined with epithelium. Theories of Rokitansky and Dowd are not entirely satisfactory. The fact that this tumor was retro-peritoneal in location and that at first aspiration contained fluid resembling chyle in color, led me to a study of the embryological origin and development of the lymphatic system in an effort to find a possible explanation of its origin. Without going into details of embryological development, of lymphatic system, the most recent investigation divides development of this system into two stages; primary stage consists of development of a series of isolated lymph sacs, which are clearly derived from veins and which become united by thoracic duct which connects these sacs with each other. These lymphatic sacs are four in number—jugular sacs, located in neck, retroperitoneal sac, located in abdomen opposite lower dorsal and upper lumbar vertebra, and posterior lymphatic sac located in pelvis. The location of these primitive lymph sacs correspond exactly with location of a group of cystic tumors, one of which is under discussion. In neck, corresponding in location to jugular lymph sac, we have a group of cystic tumors known as hygromota or hydrocele of neck, whose origin is usually given as a dilated lymph space, a rather indefinite supposition. Corresponding to the location of the primitive retro-peritoneal lymph sac, the tumor in this case developed. It seems to me that we have here very strong evidence that the so-called hygromota of neck and tumor in this case are of a common origin and that is from errors in development of primitive lymph sacs. The process of development from lymph sac to adult lymph node is as follows: The lymphatic sacs, by a process of bridging or cutting of lumen by bands of connective tissue, are transformed into a plexus of lymphatic capillaries out of which chains of lymph nodes are evolved. If this development of a particular lymph node was arrested at a stage when it was still a plexus we would have the basis for development of a future cyst.

Dr. T. C. Hood presented a case of Parinaud's Conjunctivitis.

I bring this case before you because it is a typical one and because it can easily be mistaken for a severe acute conjunctivitis of the catarrhal variety, an acute trachoma, or for even gonorrheal ophthalmia. This man is a wood-worker and his trouble began three weeks ago with redness, pain, and a muco-purulent discharge from left eye only. He was treated by two doctors and referred to me four days ago by Dr. Roller. There was a profuse purulent discharge, upper lid much swollen and on eversion large masses of fleshy granulomatous tissue in fornix. A characteristic symptom or complication of the disease is involvement of pre-auricular, parotid and cervical lymphatic glands with pain and tenderness as you see so typically shown in this case. These glands sometimes go on to suppuration and must be opened. The disease is self-limited and runs a slow course of three to six months. If treated properly it can be cured in three or four weeks. Parinaud first described it twenty-five years ago but the etiology remained obscure until in 1912 Verhoeff studied twelve cases and found a thin filamentary organism in all of them which he considered pathognomonic and judged to be a leptothrix. Case has

improved very much in last four days under 2 per cent. nitrate of silver applications and 20 per cent. argyrol, with hot fomentations to glands. These remain enlarged a long time and potassium iodid in moderate doses will help to reduce them. The disease is not a common one nor is it rare, so it should be kept in mind, the distinguishing feature being granulomatous swelling of upper conjunctiva, its one-sidedness, rarely affecting but one eye, and implication of these lymphatic glands.

Paper: "Frequent Nervous Manifestations Dependent on Errors in Reflection." Dr. J. R. Newcomb.

DISCUSSION

Dr. McKinstray: Chylous cysts come under general classification of mesenteric cysts. Dr. Hadley's case might be a mesenteric cyst even though it was retro-peritoneal and not in association with leaves of mesentery. The attempt to classify cyst as lymphatic in origin from embryonic lymphatic structures is unusual and ingenious and may be justified. However its whitish contents and the fact that it was not lined with endothelium argue against this assumption. Dowd's contention that mesenteric cysts are all embryonic in origin has been disputed and the probabilities are that both lymphatic and mesenteric cysts are acquired. Case was a mesenteric cyst of chylous variety. Patient's death was due to intestinal obstruction.

Dr. Padgett: Never saw a chyle cyst before. Cited man who had seen 320. According to literature may be any size up to man's head. Cited specimen bilocular. Attempt to produce such cysts by obstruction failed. Many cases on record producing intestinal obstruction. Many opened and drained get well. Removal seems better. Cited twenty-five drained with two deaths. Eighteen removed with six deaths.

Dr. Sharp: Many reflex neuroses arise from eyestrain. Said strain is due to contraction of ciliary muscle in producing normal, or even better than normal vision when mild errors of refraction exist. Hypermetropia and astigmatism—simple, compound and mixed—are the errors usually present. Myopia cannot be corrected by accommodation; in fact the muscle is undeveloped or atrophied in this instance. Irregular astigmatism causes tilting of head and consequent pain in neck and shoulders. The principal neuroses from errors of refraction or muscle imbalance are those known as ocular asthenopia—pain in eyes and head, of a dull or neuralgic character. Irritability, disturbed digestion, vomiting, insomnia, and the mental conditions such as mentioned by Dr. Newcomb, have been relieved or cured by proper correction of errors of refraction.

Dr. O. G. Pfaff: Have encountered two mesenteric cysts. Reported both. Many of these cysts are not recognized. Ten years ago there were 150 cases reported. Smaller cysts are usually lined with endothelial — larger not. Cited case perfectly movable. Cited cases where traumatism had produced chyle cysts, or at least made them apparent first time.

Dr. Brayton: Dr. Hood presented an interesting case. The specific organism has not been isolated. Cited many pathological conditions cured by potassium iodid. Suggested this treatment in this case of Parinaud's conjunctivitis. Relative to "eye" paper, commended Gould of New York for contributions to medical literature. Commended Dr. Hadley for his good work.

Dr. Hadley in closing: This cyst was not a mesenteric cyst but a retro-peritoneal tumor. Cannot classify on contents of the type of tumor.

Dr. Hood: The general practitioner cannot have an oculist at his elbow. He should learn to use an ophthalmoscope.

Dr. Newcomb in closing: The proctologist, gynecologist and practitioner often clear up eye troubles, but not all cases are cured. Errors in refraction must be diagnosed and properly treated. There are far more of these cases than are recognized.

Attendance seventy-eight.

Alfred Henry, Secretary.

Meeting of Feb. 23, 1915, Washington Hotel

H. E. Barnhard was elected to associate membership.

Dr. W. N. Wishard presented resolutions which provided for appointment of a committee to provide a plan for celebrating nineteenth anniversary of election of Dr. John N. Hurty as secretary of Indiana State Board of Health. Carried unanimously. Dr. Ross appointed following committee: Drs. F. B. Wynn, chairman, A. W. Brayton, J. H. Oliver, W. N. Wishard, F. R. Charleton, J. L. Freeland, L. H. Maxwell, Alfred Henry, Ada Schweitzer, T. B. Eastman, Bernays Kennedy, C. D. Humes and David Ross.

PROGRAM

Case Report: "Eclampsia, Acute Mania and Cesarean Section." Dr. John A. Pfaff.

Patient a primipara; 41 years of age; married twelve years; first pregnancy. Taken suddenly with epigastric pain and vomiting at seven and one-half months, followed by convulsion. Second convulsion six hours after first. Rectal temperature 100; pulse 126; respirations 24; blood pressure 210. Patient profoundly toxic. Solid coagulation of urine on heating. Immediate cesarean section decided on and performed at St. Vincent's Hospital at 8 p. m. same day. She went into state of acute mania and remained so for five days, condition gradually cleared and she left hospital in three weeks well. This case cited as an ideal one for cesarean section. No vaginal examinations had been made, thus practically eliminating ever present danger of infection from below. Case was one demanding immediate action on account of severe toxic symptoms. As it was the toxicity of the baby was so great that it survived only a few hours. Would have been a very slow delivery; a dilatation of cervix in first pregnancy at 41 years of age. Best consideration of both mother and child can only mean cesarean section in these cases.

A series of eleven cases of intubation were reported by Dr. Hoskins.

Ten of the cases were diphtheritic. Three of these were fatal, a mortality of 30 per cent. This is not a low death rate, but it is materially lower than the mortality from laryngeal diphtheria without intubation. These cases are diagnosed late. The family or physician has usually treated child for two or

three days for simple croup. All but two of cases were in Indianapolis. Deaths from laryngeal diphtheria are not infrequent in villages and country districts. Country physicians are well educated as to the value of antitoxin in tonsillar diphtheria. They are not apparently aware of slow action in laryngeal diphtheria nor of value and availability of intubation in these cases. Recent experiments afford a definite scientific basis for administering antitoxin, instead of our heretofore empirical dosage. Its maximum efficiency is secured when it is given at the ratio of 100 units per pound of body weight. In laryngeal diphtheria we give 200 or 300 units per pound of body weight. It should be given intramuscularly and at one initial dose. Repeated doses are superfluous. Intubation at onset of dyspnea, will save many lives.

Dr. Ada E. Schweitzer presented a report of the proceeding of the forty-second annual meeting of the American Public Health Association held at Jacksonville, Fla., Nov. 30 to Dec. 5, 1914. The program provided for six general sessions. Third session was held jointly with National Mouth Hygiene Association. There were symposia on negro health problem, evil of narcotism and on industrial hygiene. Sections on laboratories, vital statistics, public health officials, sanitary engineering and sociology also held meetings. Among important papers abstracted by Dr. Schweitzer was the report by American Public Health Service on pellagra, investigation having shown chief factor in etiology to be a too exclusive carbohydrate diet. Another was a recommendation by Dr. Nathan Strauss of New York City that pasteurization of city milk supply be placed under municipal control. A committee was appointed by association to report on standard methods of house drainage and plumbing and another committee was to arrange for a National Health Conference to include all recognized organizations for promotion of public health. Prof. William I. Sedgewick of Boston Institute of Technology was chosen president for ensuing year.

Dr. L. D. Carter read a brief paper on "Medical Service in Indiana National Guard." Among the many interesting things brought out, Dr. Carter showed progress in twenty years from a jug of whisky and a jug of Dorsey's to a fully equipped hospital.

DISCUSSION

Dr. Foxworthy commented on Dr. Carter's paper, saying the medical service in Indiana National Guard was far above the average doctor's idea of it.

Dr. Lee mentioned several cases of eclampsia treated by venesection followed by intravenous salt solution.

Dr. Burckhardt commended Dr. Schweitzer's presentation of her report. Asked Dr. Pfaff if he paid attention to liver and thyroid in the case of eclampsia and acute mania. Relative to Dr. Hoskin's paper, said society should be kept posted on contagious disease situation. Advocated early intubation.

Dr. Schweitzer said laboratory experience showed that many physicians waited too long for intubation and administration of antitoxin.

Meeting adjourned. Attendance seventy-eight.

Alfred Henry, Secretary.

MUNCIE ACADEMY OF MEDICINE

Meeting of Jan. 29, 1915

Regular meeting of Muncie Academy of Medicine was held in parlor of Y. M. C. A. building, Friday evening, January 29 and was called to order at 8:30 by Vice-President Dr. D. M. Green.

Dr. U. G. Poland conducted a profitable quiz on "Histology of the Kidney."

An hour was devoted to reports of special cases and a general discussion followed. Dr. G. R. Andrews told of a case of hemorrhage following the emptying of the uterus in cesarean section, where he had an opportunity to visually and tactually observe the action of pituitrin on the uterine muscles. In less than two minutes after the dose was given contractions began, and were complete in five minutes. Dr. Andrews further reported seventeen cases of ectopic gestation on which he had operated within the last two years; (showing a greater frequency of occurrence than is generally supposed) one of these being a double ovarian pregnancy, an exceedingly rare if not unique happening.

Dr. E. S. Green and Dr. F. E. Hill made favorable reports on the prompt action of pituitrin. Dr. Hill also advised swabbing the uterus with turpentine in order to control post partum hemorrhage.

Adjourned. H. D. Fair, Secretary.

Meeting of Feb. 19, 1915

Dr. W. C. Stephens read a paper on "Etiology of Nephritis," the main points of which are: Occupations which necessitate exposure to dampness and cold; the immoderate use of alcoholics with the accompanying indulgences are the most common predisposing causes of nephritis. The exciting causes may be considered under four heads: acute infections, conditions acting on the skin, chemical toxins, pregnancy. Scarlet fever probably heads the list in Class 1, but in adult life typhoid, erysipelas, septicemia, pneumonia or malaria are most potent factors. In Group 2 we find various chronic skin diseases, burns or scalds and profound effects on the skin because of extreme cold or dampness. By chemical toxins we mean turpentine, cantharides, salicylic and carbolic acids, phosphorus, arsenic, mercury and lead. Acute nephritis sometimes follows the use of salvarsan. The kidney of pregnancy develops late in the term; the increased mechanical pressure on the ureters, with the change in metabolism and increased autotoxins and nutritive disturbance in the kidney itself will account largely for the changes. Heredity may play a part in the causation of certain cases, particularly in families where sclerotic processes are frequent. The character of a kidney lesion depends to some extent, on the character of the toxins which produce it, and the length of time the tissues have been exposed to its action. Worry, anxiety and excitement favor development of sclerotic changes in the kidney.

Dr. C. A. Ball spoke for a few minutes on "Diagnosis of Nephritis," saying in part: Bright's original picture of albumin in urine and dropsy no longer suffices for a comprehensive description of this very complex and complicated condition. Nephritis is very insidious, but after pathological changes once

occur they may be considered as permanent. In making a diagnosis of chronic Bright's disease a careful personal history is imperative, going back to the diseases of childhood. The symptoms may be varied and complex. Nervousness, intestinal or gastric disturbances, headache, vertigo and pallor are important symptoms, the latter being particularly marked in the severe grades. In the interstitial type the disease may go unrecognized for years until some uremic outbreak or maybe an apoplectic seizure calls attention to the condition. In the chronic parenchymatous variety the urinary findings appear much earlier, and this taken with the usual dropsy help greatly to clear the diagnosis.

Autopsy findings show much renal involvement that was unsuspected during life. In chronic Bright's, polyuria with low specific gravity is the rule. Neither albumin nor casts may be present; on the other hand both albumin and casts may be present without serious lesions. Sometimes the cardio-vascular system is the real source of danger.

Adjourned. H. D. Fair, Secretary.

Meeting of Feb. 26, 1915

Dr. C. M. Mix read a paper on the "Treatment of Nephritis," saying: The treatment of nephritis as outlined in our standard text-books offers little hope of cure except in acute cases. The best we can hope to do is to relieve suffering and prolong life. I wish to call your attention to a new method as applied to the following conditions. (1) The typical symptom complex of chronic parenchymatous nephritis. (2) Suppression of urine. (3) The kidney of pregnancy. (4) The early manifestation of cardio-vascular disease. (5) The chronic interstitial nephritis. This probably can best be done by reporting a recent case. In regard to the treatment I wish to give due credit to Dr. J. F. Percy of Galesburg, Ill., who was among the first to recognize the value of thyroid substance in the treatment of nephritis. Dr. Mix here told of a patient, a man of 60, carpenter; widower; having the classical symptoms of chronic parenchymatous nephritis. Blood pressure 220; heart hypertrophied, apex misplaced; dyspnea, was unable to lie down; edematous to hips; free fluid in abdominal cavity, and dulness at base of both lungs; constant headache; urine, 20 ounces in twenty-four hours. Specific gravity 1030; albumin, 5 gm. per liter; profusion of hyalin and granular casts, acid three times normal. Treatment: thyroid gland, four tablets per day, rapidly increased to twelve, extreme limit seventeen. In one week improvement was so great he was allowed to leave hospital. After four months use of thyroid, albumin disappeared and he felt and appeared well. After eight months he resumed his work as builder, and at present, nearly twenty months, he feels as well as he ever did, eats anything he wants, and never misses a day's work. He has not taken any thyroid for eight months and the urine now shows traces of albumin. In addition to use of thyroid I would suggest that the urine be kept alkaline by something like magnesium citrate. Patient should be put to bed and on anti-nephritic diet; diaphoresis promoted; free catharsis, and free intake of water.

Adjourned. H. D. Fair, Secretary.

DELAWARE COUNTY

Regular meeting of Delaware County Medical Society was held in parlor of Muncie Y. M. C. A. building Friday evening, February 5 and was called to order at 8:15 by President C. Melvin Mix, M.D.

Dr. George S. Bond of Indianapolis delivered an address on "Arteriosclerosis." The secretary noted a few points which were in part as follows: About 10 per cent. of all adults have arteriosclerosis, due in the large majority of instances to toxins in the blood stream. These toxins are of three types, autogenous, metabolic and toxins introduced from without. Alcohol, lead and nicotin are factors, as are errors in diet and disorders of assimilation. Arteriosclerosis is first manifest in the circulatory system because the wear and tear on the arteries is greater than on any other part of the body. The great contributing factor is intemperance and excesses, not in strong drink alone, but in physical and mental effort, worry, excitement and gluttony. It is essentially a disease of the robust, active individual: the anemic and weakling seldom have arteriosclerosis. Heredity must be considered for it is a family disease: syphilis or alcoholism in the parents are factors. Arteriosclerosis and high blood pressure are not necessarily associated. Many advanced diseases evidenced by tortuosities and calcification yield a low blood pressure; while we often see high blood pressure with the radial arteries soft and easily compressible. Typical cases seldom appear before the age of 40, yet sometimes children present hardened arteries but they are usually the result of toxins of lues or the common infectious diseases such as scarlet fever or diphtheria, and in young adults, typhoid. Permanent hypertension is often present before signs of arteriosclerosis, and may be a protective measure. True angina pectoris is always due to sclerosis of the coronary artery. Renal symptoms are nearly always present although there be no active nephritis. An organ may be affected by arteriosclerosis and a secondary condition arise. There is no treatment that will restore to their normal state the changed vessel walls in advanced arteriosclerosis; all we can hope to do is to halt the process and possibly prevent any further damage. Medicines are of doubtful value. A quiet tranquil life with plenty of rest periods, a restricted temperate diet, ample elimination with a thorough understanding of one's limitations are the essentials in order to safely reach an advanced age.

The discussion was lively and those taking part were Drs. G. W. Bucklin, D. M. Green, O. E. Spurgeon, J. C. Quick, W. W. Wadsworth and C. M. Mix.

Dr. B. B. Morrow called attention to the high death rate among former hard workers who step out of business and throw their burdens on some one else. Why, if a quiet and tranquil existence is to be recommended, are so many lives of active vigorous men, victims of sclerosis, apparently shortened by retiring from business activities?

Dr. Bond: I believe in such cases the condition is well established before retirement, and the damaged metabolism due to the sudden change of habits of years or a lifetime, overwhelm the system and an aggravated toxemia results. Then the worry of a naturally ambitious individual who suddenly

realizes that he has nothing to keep him busy, either physically or mentally, is a factor of no small importance.

Adjourned. H. D. Fair, Secretary.

ELKHART COUNTY

Meeting of Jan. 12, 1915

The Society held its annual meeting in conjunction with semi-annual session of Northern Tri-State Medical Association on Jan. 12, 1915, in the auditorium of the Century Club, Elkhart. One hundred and fifty physicians and surgeons from Michigan, Ohio and Indiana attended.

Meeting was called to order at 9 a. m., by President James A. Duncan, Toledo, Ohio, who introduced Dr. Frederick G. Harris, Chicago. Sixteen cases showing skin disease presented themselves for examination and were discussed by Dr. Harris.

Case 1.—Woman, 43, acne vulgaris, accompanied by Bright's disease.

Case 2.—Woman, 50, erythematosis on face and head with depilation due to toxin of tuberculosis. The focus will be found at some other location in the body.

Case 3.—Young woman. Urticaria. Blotchy eruption in various parts of the body due to protein putrefaction in intestinal tract from toxins which are current in blood stream.

Case 4.—Young woman. Acne rosacea. Worse at menstrual period. Sebaceous glands are especially large and overactive.

Case 5.—Middle aged woman showing dark brown pigmentation all over body. Several spots on tongue and buccal surface. Diagnosis: between chronic diabetes and some disease of adrenals, not tuberculous.

Case 6.—Young woman. Acne. Marked seborrhea, tendency to rosacea.

Case 7.—Middle aged man. Lupus erythematosis. Scarred face, infiltration of skin shown in individual lesions. Not lues, not lupus vulgaris.

Case 8.—Old woman. Purpuric condition of lower extremities. Rupture of smaller capillaries and hemorrhage into skin. Cardiac and kidney involvement. Gravity a factor.

Cases 9, 10, 11, 12 and 13.—Young men. Acne vulgaris of different degrees. Two show large indolent abscesses in skin. Involvement first of upper part of follicles, then down into gland cells. Stock vaccines have advantage over autogenous since they contain acne bacillus which is hard to obtain and to grow. Calcium sulphid treatment.

Case 14.—Young man. Psoriasis.

Case 15.—Middle aged man. Psoriasis. Both chronic and difficult to cure.

Case 16.—Boy, aged 6. Ichthyosis.

Paper, "The Premature Infant," H. J. Morgan, Toledo.

One out of every seven births is premature. Premature child weighs less than 4 pounds and measures less than 19 inches. Good chance for infant at seven months or over and weighing 3 pounds or over. Chief difficulty is the lack of development of nervous system especially heat regulating apparatus. Artificial heat not carefully applied causes either high temperature or low. Chances for life depend on stage in development of gastro-intestinal tract, presence of congenital syphilis, tuberculosis, etc. Essentials: furnish proper food, heat and air. Capacity of stomach is one-half to one ounce. Start by putting few drops on tongue and wait for child to swallow. Catheter and funnel when child cannot swallow. If child is robust, no food but water for twelve hours. Dilute mother's milk one-half at first. Feeding interval one hour from 6 a. m. to 9 p. m., then every two hours during night gradually increasing the interval. Each child must be studied—special modifications. Peptonization of artificial food. Incubators all worthless. In many hospitals, hot room with specially constructed walls, etc., to furnish proper heat, light and ventilation. Large sized clothes-basket padded and lined with good sized blankets, etc. Warm water bottles. Rectal temperature every two hours for three days. Move child as little as possible. Gauze face cap for mother or nurse if either has a cold. More heat needed if rectal temperature falls below 97 F.

Discussed by Drs. Becknell, Osborn, J. A. Work, Sr., Siders, Shumaker and Morgan.

Paper, "Efficient Tonsil Work, and the Need of Having It Done by Efficient Men," K. K. Wheelock, Fort Wayne.

General practitioner should not operate on tonsils. Complete removal by resection. "When we stand still we are stepped on, when we go forward we are jostled." Cooperative plan. Diseased tonsils foci of infection. Special man knows too little of general medicine, general man knows too much of special medicine and surgery.

Discussed by Drs. Bernstein, Lent, Shillito, Thompson, Hill, Reed, Daniels, Knapp, Mitchell, Spohn, Boyd-Snee, and Wheelock.

Paper, "Perpetual Irregularity of the Heart," W. J. Wilson, Jr., Detroit.

Irregularity due to disturbance of fibrils in ventricular bundle. High grade of change in heart muscle. Sino-auricular node. Diffuse fibrous change then proliferation of connective tissue. Causes, infections and senility. Dr. Wilson's series: twenty-two cases studied, youngest 18, oldest 74. Seventy-five percent. over 40 years of age. Venous waves. Heart as slow as 30-32 per minute with fibrillation present. Symptoms of failing heart muscle. Prognosis variable. Two of his cases dead. McKenzie has observed cases as long as thirteen years. Digitalis secured a better contraction of heart muscle. Salicylates, vaccines, iodids. Cases reported.

DISCUSSION

Dr. Morteson, Battle Creek: Two classes which everyone meets, (1) auricular fibrillation and (2) those showing premature beats. In this first form irregularity is constant; in second, may get regular beats, then a pause, and then heart goes on. It does not miss but a premature beat precedes a pause. Convinced they are evidences of pathological conditions. Later in life cases of premature beats develop cardiac incompensation. McKenzie: "Once an auricular fibrillation always an auricular fibrillation." Patient must be watched, may develop repeated attacks of incompensation. McKenzie: After hospital treatment, has patients come back once a week, then once in two or three weeks. If they neglect to come back eventually they return with extreme incompensation. He instructs them in use of digitalis. Further discussed by Drs. Yoder, Kimberlin, Preble, Barwick and Wilson.

Paper, "Frequency, Importance and Early Diagnosis of Tuberculosis in Children."

Tuberculous adults are recruited from the ranks of children. Tuberculosis is almost always in its incipiency a disease of childhood. The tragedy of a young person developing and dying of tuberculosis dates back to his childhood. Ninety-five percent. of schoolchildren react to von Pirquet test. Five per cent. of all new-born are infected before end of first year. Tuberculosis, a social disease acquired by contact. House pets may carry infection. Infection through cow's milk a common fact. Most cases occur through bronchogenous route. Councilman says it is primary in intestines in 37 per cent. of cases. Primary tonsillar infection only three times in one thousand cases. Tuberculous cervical adenitis due to sputum coming in contact with tissues in pharynx. Infection of cervical and bronchial glands by way of tonsils anatomically impossible. Proper history taking an art. Forty per cent. more frequent in cases where there is tuberculosis in immediate family more than in collateral branches of family. In children it is a disease of lymphatic glandular tissue—examination of mediastinum imperative. Pressure symptoms more frequent in adults from adhesions of healed glands in mediastinum. Inspiratory and expiratory sounds—most frequent finding is irritated heart. Presence of murmur, constant and significant, characteristic cardiopulmonary sounds. Roentgen ray, biological tests and sputum examinations.

General discussion.

Paper, "Treatment of Pneumonia with Special Reference to the Aged," Robert B. Preble, Chicago.

General discussion.

Paper, "The Special Dangers Attending Surgical Operations on Children," C. G. Darling, Ann Arbor.

General discussion.

Dr. Kimberlin addressed the evening session briefly on a Public Health topic. The visiting physicians were then entertained by the local physicians by a theater party at the Orpheum.

The Elkhart Academy of Medicine were hosts to the visitors at 12 o'clock luncheon at the Century Club and the Elkhart County Medical Association entertained at 6 o'clock dinner.

James A. Work, Jr., Secretary.

Meeting of Feb. 4, 1915

Meeting called to order by President Haywood at 8 p. m.

Paper, "Some Unusual Accidents Affecting the Vision," C. D. Goodrich, Elkhart.

Case 1.—Wound of eyeball caused by piece of hammer steel which penetrated the cornea and lens. Steel was extracted by a giant magnet through an incision at the sclero-corneal junction. Permanent cataract, vision nil. Case 2: Freight conductor shot in arm and abdomen. On leaving hospital he noticed his vision was defective. Examination showed optic neuritis caused presumably by cerebral hemorrhage and shock. Case 3: Woman suffered dislocation of upper part of the right nasal cartilage. Ethmoiditis resulted from the deformity and finally an orbital cellulitis with rapidly failing vision. She had lost all perception of light. Partial resection of middle turbinate bone was done and in ten days her vision had returned to normal. Now, three years later, her vision remains normal. Case 4: Railroad trainman. Dislocated upper part of left nasal cartilage of septum. Examination: vision 20/50 in left eye. Cartilage replaced and held with Simpson's nasal tampon. Normal vision after three weeks. Case 5: Farmer, violent fall to floor. Rupture of small retinal vein. Result: blood clot remained adherent to the posterior capsule of the lens with formation of posterior cortical cataract about 2 cm. in length. This case was seen one year after the accident at which time the vitreous and choroid were clear. Case 6: Young man wearing glasses stumbled and fell. Glasses were broken and a large piece of lens was forced into right eye. Incisive wound through cornea, iris, and lens. Aqueous and vitreous lost. Enucleation. Case 7: Young man. Fracture left nasal bone. Bone replaced and held by splint. Convergent squint of left eye which finally rectified after several weeks.

Discussion by Drs. Eby, W. B. Kreider, Spohn, D. L. Miller, Barwick and Goodrich.

Bills amounting to $126.85 incidental to Annual Meeting and Tri-State Meeting were allowed. One dollar for chairs at regular county meetings was allowed. Drs. J. C. Mast, S. O. Barwick, and E. Holdeman were unanimously elected to membership. Adjourned. James A. Work, Jr., Secretary.

FLOYD COUNTY

Floyd County Medical Society met in regular session February 12 at The Tavern, New Albany.

After general routine of business, Harrison bill was read by Dr. Frank H. Wilcox and freely discussed by the members.

Dr. H. B. Shacklet presented the "Whole Time Health Bill," and after the discussion of same a motion was made filing a protest by the Society against the bill on the grounds that it is "unjust to the public and to the reputable practicing physician, in which graduates from institutions holding the degree of D.P.H. (who are not doctors and know very little about diagnosing disease be they ever so well versed in hygiene) are eligible to be health commissioners." It takes the best physician to be the best health officer. The position of health commissioner should be above politics. He should be appointed on examination—the physician receiving the best grade to receive the position and remain there until removed by death, resignation, or incompetency. The fee, as provided in the bill, was insufficient for a man to devote his entire time to the work.

The Society passed resolutions opposing the Works Health Bill, now before the national legislative body, and instructed the secretary to write our representative in congress and the two senators from this state informing them of our position. Adjourned.

P. H. Schoen, Secretary.

JOHNSON COUNTY

Meeting of Jan. 13, 1915

The Johnson County Medical Society met at Franklin January 13 and elected the following officers for the ensuing year:

President, Dr. L. L. Whitesides, Franklin (reelected); vice-president, Dr. D. L. Phipps, Whiteland; secretary-treasurer, Dr. D. R. Saunders, Franklin; censor, Dr. E. B. Chenowith.

The regular meeting day of the Society changed to second Wednesday in each month, to be held at Franklin. Adjourned.

D. R. Saunders, Secretary.

Meeting of Feb. 10, 1915

The Johnson County Medical Society met in regular session February 10, at Franklin. Meeting called to order by President Whitesides, with ten members present.

Minutes of preceding meeting read and approved.

Paper on Pneumonia was read by Dr. E. B. Chenowith of Ninevah. Discussion of paper was opened by Dr. O. A. Provines who presented the management and treatment given.

"Homeopathic Therapeutics" was given by Dr. D. R. Saunders, followed by a general discussion.

A committee was appointed to draft resolutions on the death of Dr. Potter.

Meeting adjourned to meet second Wednesday in March. D. R. Saunders, Secretary.

KNOX COUNTY

The Knox County Medical Society met in regular session at Vincennes, February 9.

Dr. Bryan read a paper on The Care of Pregnant Women. In part the essayist said that women call the doctor earlier in confinement than they used to, and this should be encouraged. Many disorders and complications are likely to arise during gestation, and the pregnant woman's welfare, to a great extent, depends on the watchful care of her medical adviser.

The gastro-intestinal trouble which arises early in pregnancy usually is one of the things that brings the patient first to the doctor. Simple, not strict rules should cover the diet and the patient's likes and dislikes should be consulted. By taking a little digestible light nourishment before arising in the morning and a little between meals, one may often control the morning sickness. When the stomach rejects all food, you must resort to rectal feeding.

Constipation is the rule in pregnancy and it is important that the bowels move once a day. Regulation of habits, diet, and exercise should be used mostly for this purpose. Mild laxatives should be given when necessary but do not use drastic cathartics.

Kidneys should be looked after closely and urine examined frequently.

Violent exercise must be prohibited and light exercise encouraged. Coitis should be restricted. It is injurious to some pregnant women. Total abstention should be enjoined at menstrual dates, especially in women who previously have aborted.

Frequent bathing is necessary to assist in functionating of the skin.

To prevent the formation of striae gravidarum skin massage with olive oil or liquid albolene will prove of benefit. In all cases as little medicine should be given as possible. The women should be instructed to report any discomforts to the physician at once and receive advice about same.

Instructions should be given regarding the advent of labor; how patient may decide when it is at hand; and cordial encouragement should be given her, since she awaits the event with much anxiety and trepidation.

DISCUSSION

Dr. Beckes: The care of the pregnant woman resolves itself to proper hygiene and making patient as comfortable as possible. Give medicine only when absolutely necessary. Advice, especially to young mother with her first child, is of great advantage.

Dr. Jones: Not only care, but advice and attention are greatly needed during the state of pregnancy in women. Adjourned.

M. L. Curtner, Secretary.

LAKE COUNTY

Regular meeting of Lake County Medical Society was held at Gary Commercial Club, Thursday, February 11, at 7:30 p. m., Dr. J. W. Iddings presiding.

There were thirty-seven members present, and four visitors, the largest attendance at a regular meeting in the history of the society.

Minutes of January meeting read and approved.

Application of Dr. E. K. Newton of Whiting, read, referred to censors, approved and duly elected to membership.

Resolutions condemning the Eugenics and the Chiropractic bills were adopted and the secretary ordered to forward copies to our senator and representatives in the Indiana legislature.

A resolution on the death of Dr. David J. Loring of Valparaiso, was presented by Drs. Gibbs, Howat, and Brannon, and on motion same was adopted and made a part of the records of this society.

An informal discussion of the Federal Anti-Narcotic Law was held, explanations of the various features of the bill being given.

Dr. Metcalf reported progress in the matter of a county tuberculosis hospital.

Dr. Howat presented a review of the cardio-vascular literature for 1914.

The president announced the following program for March 11: Fees, T. B. Templin; Ethics, H. M. Hosmer; The Business Side of Practice, G. W. Miller; The Dignity of the Profession, E. E. Evans; The Wail of the Pessimist, E. M. Shanklin; The Medical Optimist, C. C. Brink; The Social Side of Medicine, T. W. Oberlin; The Psychology of Medicine, A. J. Lauer; Practice in the '80's, H. L. Iddings; Early College Days, J. C. Gibbs. Papers to be about five minutes each. Adjourned.

E. M. Shanklin, Secretary.

MADISON COUNTY

The Madison County Medical Society met February 23, at the Grand Hotel, Anderson, with fifty-five members present.

The main feature of the program was a pointed presentation of the Harrison Anti-Narcotic Law (federal), and Mr. Paul B. Hayes, Attorney-at-Law, who had made a particular study of the law, was present to answer any questions presented by the doctors.

Following the discussion of this act a series of medical case reports were offered.

Applications of the following physicians for membership in the Society were presented: Albert J. Buxton, Anderson; Charles Armington, Anderson;

Fred A. Kimble, Anderson; Earl E. Brock, Anderson, and V. W. McDonald, Perkinsville.

Lunch was served following the business session. Adjourned. J. M. Stoddard, Secretary.

MONTGOMERY COUNTY

The Montgomery County Medical Society met January 19 at the High School building, Crawfordsville.

Dr. E. W. Ream, D.D.S., read a paper on "Infections of the Mouth; Causes and Treatment," exhibiting lantern slides showing normal and pathological conditions.

Favorable action was taken relative to the maintaining of the present high standard of medical education and admittance to practice.

The next meeting will be held February 16, when Dr. F. B. Wynn, state president, will read a paper on "Pneumonia; Complications and Treatment."

Adjourned. Thomas L. Cooksey, Secretary.

VANDERBURG COUNTY

At the meeting held in Y. M. C. A. Dec. 22, 1914, the following officers were elected for the ensuing year: president, Dr. Carl Viehe; vice-president, Dr. Sidney Eichel; secretary-treasurer, Dr. Wallace C. Dyer; Dr. P. H. Linthicum was elected censor for the term of three years; Dr. George W. Varner was chosen as delegate to the state meeting with Dr. A. M. Hayden as alternate. The delegates were instructed to invite the state society to meet in Evansville in 1916. Dr. R. B. Bretz and Dr. Charles K. Ingle were elected to membership in the Society.

Dr. Francis Hankins read a valuable paper on New Remedies. Dr. F. L. Daviess presented a paper on Vibratory Massage. Discussion by Drs. Hayden, Hunt, Harpole and Brose.

At the meeting held January 12 Dr. G. W. Varner presented a paper on The Pasteurization of Milk. There was a wide discussion led by Dr. W. H. Ehrich. On motion the president appointed Drs. Edwin Walker, L. H. Worsham and W. H. Ehrich as a committee to assist the city board of health in its campaign for the passage of a pure milk ordinance.

Dr. W. H. Ehrich was the essayist for the meeting of January 26. His subject was "One Thousand Cases of Diphtheria I Have Observed." The discussion was generally indulged in. Dr. G. W. Lorenz presented a case of osteomyelitis, showing at the same time Roentgen rays taken before and after operation, the latter being done by Dr. Varner. On motion of Dr. D. S. Gobel a committee was appointed for the purpose of aiding in the passage of laws of value to the profession and to prevent the passage of measures tending to be harmful. Drs. Gobel, L. E. Fritsch and C. B. Harpole were named on the committee.

The Society listened to a symposium on anesthesia on the night of February 9, papers being presented on the subject by Drs. Charles Seitz, Robert Viehe and R. B. Bretz.

Following much discussion the Society decided to send Dr. L. E. Fritsch to Indianapolis to aid in preventing the passage of the Chiropractic bill before the present session of the legislature.

Dr. W. F. Clippinger reported a case of cerebrospinal meningitis and Dr. Charles Yeck a case of atheroma of the aorta with a dissecting aneurysm immediately above the right coronary artery, showing the specimen.

Wallace C. Dyer, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Alcresta Ipecac Tablets.—Tablets containing an adsorption product of ipecac alkaloids and Fullers' earth, each tablet representing 10 grains of ipecac. The ipecac adsorption product is said to pass the stomach unchanged but to be decomposed in the intestine with liberation of the ipecac alkaloids and thus to exert the amebacidal action of ipecac in the body. Eli Lilly and Co., Indianapolis, Ind. (*Jour. A. M. A.*, Feb. 13, 1915, p. 591).

Typhoid Combined Vaccine (Prophylactic).—Marketed in vials and syringes, each package containing three doses. Schieffelin and Co., New York (*Jour. A. M. A.*, Feb. 20, 1915, p. 665).

Cantharidin, Merck.—A non-proprietary preparation of cantharidin. Merck and Co., New York (*Jour. A. M. A.*, Feb. 20, 1915, p. 665).

PROPAGANDA FOR REFORM

Celerina, Aletris Cordial and Kennedy's Pinus Canadensis, Light and Dark.—As glaring instances of nostrums exploited to physicians on unscientific claims and false representations, the Council on Pharmacy and Chemistry has prepared reports on the products of the Rio Chemical Co., namely, Celerina, Aletris Cordial, Kennedy's Pinus Canadensis, Light or Abican, and Kennedy's Pinus Canadensis, Dark or Darpin.

In addition to 42 per cent. of alcohol Celerina is stated to contain kola, viburnum, celery, cypripedium, xanthoxylum and aromatics. There is no ingredient in Celerina, except the alcohol, that has any recognizable activity and the alcohol content is nearly as great as that of whiskey. The sooner it is realized that this preparation is essentially nothing but alcohol and bitters exploited under a fancy name, the better for the science of medicine and the public health.

In addition to 28 per cent. of alcohol, Aletris Cordial is stated to contain aletris, helonias and scrophularia. These drugs have been discarded as valueless by modern scientific medicine. In Aletris Cordial there is no ingredient capable of producing any other effect than the alcohol stimulation and such psychic effect as may be due to the bitter taste. Yet physicians are asked to believe that "probably no remedy is so uniformly successful in the prevention of threatened miscarriage as Aletris Cordial, Rio." Alcohol being the essential constituent of Aletris Cordial and the amount being high enough to promote the formation of the alcohol habit, the recommendation to administer it during pregnancy and to young girls is dangerous and an outrage.

Kennedy's Pinus Canadensis, Dark, recently renamed "Darpin" and Kennedy's Pinus Canadensis, Light, recently renamed "Abican" are of interest

chiefly because of the unwarranted claims which are made for them. The "dark" preparation appears to be some sort of a tannin-bearing extract. The "light" preparation appears to be a sulphate of zinc-alum injection. It is devoid of tannin and is not an extract of pinus canadensis as claimed. A discussion of the claims made for these preparations is superfluous. It is enough to mention that they are recommended in such diseases as albuminuria, fetid perspiration, gonorrhea, uterine hemorrhage and leukorrhea (*Jour. A. M. A.*, Feb. 13, 1915, p. 606).

Tri-Iodides, Three Chlorides and Maizo-Lithium.—As an illustration of unreliability of claims and unscientific character of proprietary mixtures the Council on Pharmacy and Chemistry published reports on Tri-Iodides, Three Chlorides and Maizo-Lithium, products of the Henry Pharmacal Company (J. F. Ballard, proprietor).

The A. M. A. Chemical Laboratory reported to the Council that contradictory and false claims were made in regard to the composition of Tri-Iodides (Henry). The Council held that Tri-Iodides conflicted with its rules in that the composition was incorrectly stated, because it was advertised indirectly to the public, because unwarranted therapeutic claims were made for it, because the name did not indicate the potent ingredients and because the mixture was unscientific.

Three Chlorides was claimed to contain mercuric chloride, arsenic chloride and ferrous chloride (protochloride of iron). The A. M. A. Chemical Laboratory reported to the Council that, while the advertising matter laid much stress on the superiority of the protochloride of iron which was stated to be present, the iron was not in the ferrous but in the ferric condition. The Council held Three Chlorides in conflict with its rules in that its composition was not correctly stated, in that it was advertised indirectly to the public for the treatment of diseases with the likelihood of doing harm, in that exaggerated and unwarranted therapeutic claims were made for the preparation in that the name of this mixture did not indicate the presence of its potent constituents: iron, mercury and arsenic, and in that the routine administration of mercury and arsenic with iron in fixed combination is irrational.

Maizo-Lithium is one of the many proprietary lithium preparations based on the disproved theory that lithium dissolves uric acid deposits in the body. While claimed to contain "maizenate of lithium" the Association's chemists reported to the Council that they questioned the existence of such a compound, that the manufacturer had failed to submit evidence of its presence in his preparation and that chemical analysis indicated the presence of lithium citrate, instead. The Council held Maizo-Lithium in conflict with its rules in that its composition was not disclosed, in that it was advertised indirectly to the public and in that unwarranted therapeutic claims were made for it (*Jour. A. M. A.*, Feb. 6, 1915, p. 528).

Purity of Ether and Postanesthetic Glycosuria.—Animal experiments by Ross and Hawk show that postanesthetic glycosuria is not due to impurities as has been claimed, but is brought about by a carbohydrate free diet prior to the anesthesia. Those who claim that the U. S. P. tests for the purity of ether are insufficient, should present better evidence than they have so far done (*Jour. A. M. A.*, Feb. 20, 1915, p. 668).

Cod Liver Oil versus Milk, Butter and Eggs.—Like other fats, cod liver oil is readily digested and utilized in the body. Its disagreeable taste has largely outweighed its availability as a nutrient. Recent experiments have established that the peculiar growth promoting qualities of cod liver oil are likewise possessed by butter and egg-yolk fat. There seems to be no reason, therefore, to administer the unpalatable cod liver oil (*Jour. A. M. A.*, Feb. 20, 1915, p. 667).

Cod Liver Oil Cordials.—To determine if the growth promoting principle of cod liver oil is contained in the oilless cod liver oil preparations on the market, feeding experiments have been made with some of these preparations by J. P. Street of the Connecticut Experiment Station. In these experiments it was found that the normal nutrition and growth of rats was not maintained when the fat of a standard ration was replaced by a representative amount of Hagee's Cordial of the Extract of Cod Liver Oil Compound, Vinol, Wampole's Perfected and Tasteless Preparation of an Extract of Cod Liver and Waterbury's Compound, Plain. When, then, these animals were placed on a ration containing an equivalent amount of cod liver oil, normal nutrition and growth was soon established (*Jour. A. M. A.*, Feb. 20, 1915, p. 638).

Towns' Epilepsy Treatment.—This is a bromid mixture marketed by the Towns' Remedy Company, Milwaukee, Wis. It was found by the A. M. A. Chemical Laboratory to contain the equivalent of 21.3 grains of potassium bromid and 0.78 grain of potassium iodid per dose (one and one-half teaspoonfuls) (*Jour. A. M. A.*, Feb. 20, 1915, p. 683).

Virol.—The Council on Pharmacy and Chemistry voted to refuse recognition to Virol (sold by the Etna Chemical Co. in the United States) because the claims made for it were unsubstantiated and unwarranted. A referee who analyzed Virol concluded that it was an extract of malt, with fat and a small amount of protein. He held that Virol could not be considered a "complete food" as claimed, nor an ideal food for infants (*Jour. A. M. A.*, Feb. 20, 1915, p. 683).

Salesthyl and Sal-Hyl.—Salesthyl, a liquid marketed in capsules, is stated to be the menthyl ester of methyl salicylate. Sal-Hyl is stated to be an ointment of Salesthyl, but the exact composition is not disclosed. Salesthyl was submitted to the Council on Pharmacy and Chemistry with the claim that it had the properties of salicylates but to be more efficient. The evidence to substantiate the therapeutic claims was found to be inconclusive and untrustworthy. Being similar to "sal-ethyl," described in N. N. R., the name Salesthyl was held objectionable. The Council refused recognition to these preparations (*Jour. A. M. A.*, Feb. 20, 1915, p. 684).

Analutos.—Analutos is a name applied to calcium acetyl-salicylate. The Council on Pharmacy and Chemistry refused recognition to Analutos because it was held not to have any advantages over acetylsalicylic acid. In view of this, it was held that medicine should not be burdened with this non-descriptive name (*Jour. A. M. A.*, Feb. 20, 1915, p. 684).

Budwell's Emulsion.—Budwell's Emulsion No. 1 is stated to contain cod liver oil, "Iodide of Arsenic," "Iodide of Calcium" and "Iodide of Manganese." Budwell's Emulsion No. 2 is claimed to contain the ingredients of the first and also creosote carbonate and guaiacol. The Council on Pharmacy and Chemistry refused recognition to these preparations because the exploitation made likely their use as "consumption cures" and because they are irrational shotgun mixtures (*Jour. A. M. A.*, Feb. 20, 1915, p. 684).

Citarin.—Citarin was admitted to New and Nonofficial Remedies in 1906. The Council on Pharmacy and Chemistry held that experience had failed to demonstrate the value of Citarin as a uric acid solvent and hence directed the omission of it from New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 20, 1915, p. 685).

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ORIGINAL ARTICLES

THE TREATMENT OF GENERAL PERITONITIS *

DANIEL N. EISENDRATH, A.B., M.D.
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CHICAGO

I am not here today to tell you anything new and startling, but simply to renew a plea for what may seem to many of you a "stale subject." The large number of acute abdominal affections which I see every year have impressed me with the necessity of asking for better team work between the practitioner who is first called and the surgeon. The general practitioner should not wait for twenty-four to forty-eight hours after the onset of acute symptoms until he has made an exact diagnosis of the source of the trouble. He should not consider it a confession of ignorance to call in a surgeon and tell him, "I know there is something wrong in this abdomen and I did not believe we could afford to wait any longer for an exact diagnosis to be made." The "acute abdomen" is a distinct indication for an early division of the responsibility of the case with a surgeon. How often have I been asked to operate when my first thought was why was I not called one or two days before. It is indeed sad to watch a valuable life ebb away because the family physician and trusted friend hesitated to call in a surgeon with the thought that the symptoms would yield to cathartics or the starvation treatment. In spite of frequent discussions and papers on general peritonitis, and in spite of the improvement in methods of treatment, the rank and file of the profession has not yet been sufficiently impressed with the fact that we can save the majority of cases of general peritonitis, if a diagnosis is made in the first twenty-four hours. The fifty cases which I have operated on up to the time of writing this paper, have convinced me that the above statement is not an exaggeration.

PATHOLOGY

The recent work of many investigators has revealed the noble manner and the many resources which the peritoneum employs to fight the battle against its enemies. Constantly reinforced by new generations, each of which possesses greater resistance against the bactericidal properties of the peritoneal forces than its immediate predecessors, these bacterial enemies wage a brave fight for existence. As soon as microorganisms begin to escape from the focus of infection, the reaction of the peritoneum begins. Fluid, at first clear and serous in character escapes in large quantities. This exudate rapidly becomes more turbid (sero purulent) and finally purulent, as the result of the escape from the vessels and tissues, of myriads of cells which act as phagocytes. The exudate contains many substances which act upon the bacteria either to dissolve them or to neutralize their poisons, in short, to fight them in every possible manner. Modern pathology teaches that if we can only close the source of infection so as to cut off the enemy's line of communication with its base of supplies, that we can depend upon the antitoxins and other bactericidal properties of the peritoneal exudate to achieve victory in the battle, in the majority of cases. The peritoneum can absorb enormous quantities of fluid all over its surface, but the amount taken up is greatest at the diaphragm and least in the pelvis. Fowler first showed in an empirical manner, and it has been confirmed by the later experimental work of others, that if we elevate the body to an angle of about 70°, the greater

* Read before the Indiana State Medical Association at Lafayette, Sept. 24, 1914.

part of the peritoneal exudate will gravitate to the pelvis. It is generally conceded that no matter what sort of a drain we employ, it will not act for more than a few hours, twenty-four at the longest. The enormous improvement in our percentage of recoveries during the past ten years has taught us that if in addition to sealing up the source of infection, we can remove at least some of the exudate containing the rapidly multiplying organisms, that reinforcements will be poured out in the shape of exudate and phagocytes containing fresh ammunition, before the peritoneal reactive forces are exhausted. This knowledge of the reactive properties of the peritoneum is the keystone of our modern surgical treatment. Unfortunately, we seldom have to deal with a single bacterial species, i.e. monoinfection is rare, and there is

Fig. 1.—How suprapubic drainage tube extends into lowest point of pelvis.

also a great difference in the virulence of the two or more varieties usually taking part in the fight.

At times, the organisms are of such a virulent type that the peritoneum is overwhelmed in a few hours. In such cases we find but little exudate and few visible changes in the peritoneum to explain the very early and severe septic symptoms. In other cases, the exudate is present in large quantity, but again the peritoneal forces are defeated by the high degree of virulency of the organisms. In spite of early diagnosis and operation we have not yet succeeded in checking the ravages of such powerful enemies in these two classes of cases.

The first two days is the period during which the surgeon can do the most good. After that time, in the majority of cases, there is a tendency toward walling off the pus in the milder cases, by the formation of fibrin and adhesions between the adjacent coils of intestine.

We possess no diagnostic means by which we can ascertain in any given case, either before or immediately after operation, as to whether the natural reactive forces of the peritoneum will suffice to win the battle. It is the almost unanimous opinion of surgeons that we must come to the aid of the peritoneum as early as possible. After the third or fourth day, when the medullary centers and heart muscles are beginning to be saturated with the bacterial poisons, and the intestinal muscular wall has become paralyzed, our response to the call for help will be of little avail. We can do most good by sealing up the atrium and draining can help the infected exudate in so that it can be replaced by fresh serum and phagocytes.

SYMPTOMS

A study of the histories of my own cases reveals the fact that the diagnosis of general peritonitis was usually made from the history of the case and certain clinical data which I will enumerate. A survey of a number of recent articles by other surgeons shows that they have also separated the wheat from the chaff and regard certain symptoms as of great importance and others of doubtful or no value.

VALUE OF CLINICAL HISTORY

Aside from the typhoid perforations, the chief sources of peritonitis are the appendix, duodenum, stomach, gall-bladder and female adnexa. If there is a history of previous attacks of appendicitis or gall-stones or cholecystitis, the solution of the question as to the origin of the peritonitis is rendered much easier. If there has been a history of indigestion and other signs pointing to a gastric or duodenal ulcer, this is of great value. In the female, the pelvic organs enter into consideration as one of the most frequent sources of peritonitis. In most of my cases of appendiceal peritonitis the perforation or gangrene occurred during the first attack. Again, in two of my five cases of gastric and duodenal perforations there was absolutely no previous symptoms pointing to an ulcer. This experience is rather the rule than the exception and emphasizes the fact that the previous history cannot be relied upon to indicate from which organ the peritonitis arose.

In a paper read last year before our State Society by Dr. Kanavel, of Chicago, he made a plea for early operation in what he called the

acute abdominal crisis or emergency without losing valuable time in trying to make an exact diagnosis of the source of the trouble. The majority of the lesions are in the right half of the abdomen and right sided incision will quickly reveal the seat of the trouble before the tide of battle is turned in the enemies' favor. I do not deny that the history is of value, but it is less so than our local and general findings.

LOCAL SIGNS

Evidence of Free Fluid.—The amount of exudate is never of sufficient amount to be demonstrated by areas of dulness shifting with change of position. At times there is retention of urine in spite of the fact that we are told by the patient or nurse that plenty is being passed, hence when an area of dulness appears above the pubes, the catheter quickly removes all doubt as to the nature of the dulness.

Abdominal Distension.—In the first twenty-four hours there is little if any distension, but during the second day the abdomen appears a little fuller if looked at from the side. When the degree of distension or tympany appears which we were accustomed fifteen or twenty years ago, to think was an important sign of peritonitis, the process is almost too far for operative interference. The diagnosis must be made before the abdomen is so distended that it is apparent to every novice. Absence of liver dulness is so unreliable a sign that no time should be wasted in eliciting it.

Seat of Spontaneous Pain.—This is of great value in appendiceal cases if it was at first general or umbilical and a few hours later was felt in McBurney's point. In gastric or duodenal or gall-bladder perforations the first symptom is often close to the seat of the ulcer but soon becomes lessened. In duodenal perforation the contents escape along the ascending colon and often cause right iliac pain as in appendicitis. In many of my cases the spontaneous pain disappeared in a few hours and was no longer present when I saw the patients.

Muscular Rigidity and Tenderness.—The larger my experience becomes, the more reliance have I learned to place upon these two signs. They are also not infallible. In children who are crying constantly it is difficult to palpate the abdomen satisfactorily. Again, I have seen a few cases (both in children and adults) where the abdominal wall was quite soft because the nervous system has been overwhelmed by such a virulent poison that it was unable to offer its usual reflex resistance. If one sits down alongside the bed, with the patient's thighs flexed on the abdomen and the thorax and head slightly raised, one quickly learns to ascertain the approximate extent of the muscular rigidity and tenderness. It is best to palpate gently with the hand flat against the abdomen and not to dig into the skin. In some cases where I have observed the patient from the onset of the peritonitis, I have been able to watch this board-like rigidity or resistance of the abdominal muscles and the tenderness spread from the primary focus all over the abdomen. This invariably occurs during the first six to twenty-four hours and it is during this period that we ought to make our diagnosis. In cases seen on the evening of the first or during the course of the second day, the rigidity is either quite marked on the right half of the abdomen in appendiceal or gall-bladder cases, or over the upper half or diffuse over the entire abdomen in gastric and duodenal perforations. In pelvic infections the rigidity and tenderness are, of course, at first most marked in the lower half of the abdomen. Of all of the local signs this diffuse board-like rigidity and tendernes is now regarded by nearly every surgeon with a large experience as the two most important ones, and should be looked for as soon as acute abdominal symptoms appear, no matter what their source may be.

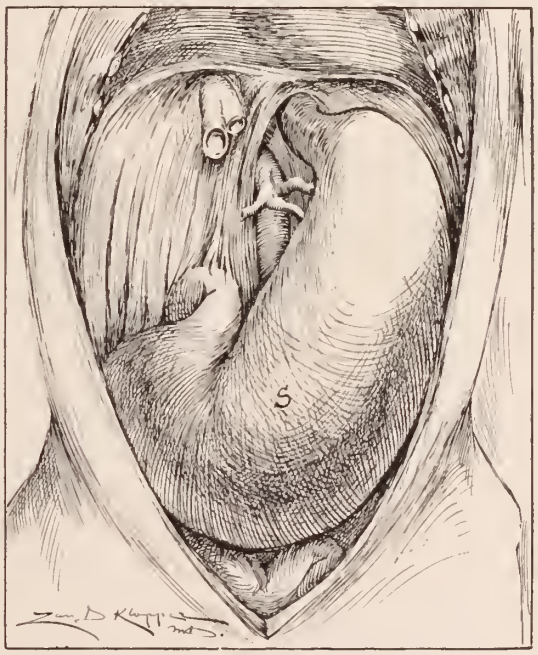

Fig. 2.—Acute gastric dilatation. Note how distended viscus fills entire abdominal cavity.

Vomiting if independent of food ingestion is of great value as an early symptom but unfortunately it is also not constant enough to be depended on. In the later stages, especially on the third day, the vomiting is an evidence of intestinal paralysis as shown by the abdominal distension. At this time the other evidences of a generalized peritonitis are so marked that recurrent vomiting is not necessary to make a diagnosis.

GENERAL SIGNS

White Blood Count.—A marked leukocytosis (18-24,000) is of great value as an evidence of good resistance on the part of the individual.

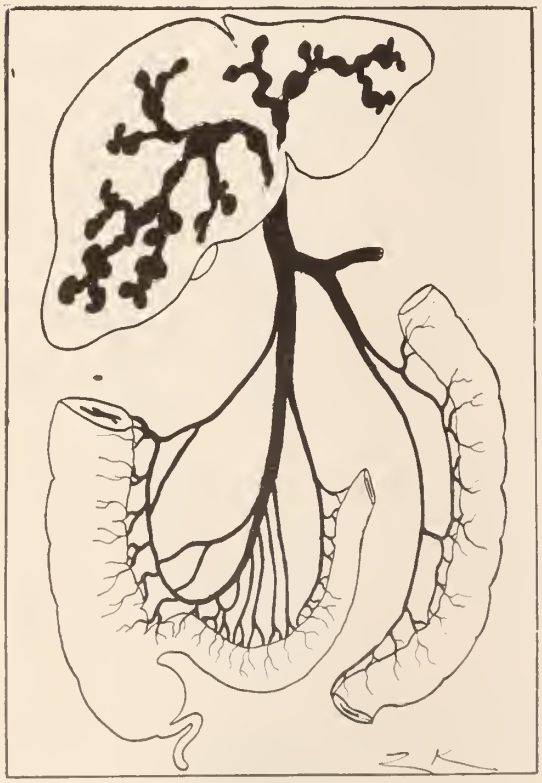

Fig. 3.—Portal circulation. Note how infected thrombi can be carried to liver.

Otherwise, however, it is of comparatively little value since it is present equally as much in a localized as in a general peritonitis. Again, I have seen a number of typical cases especially in children with a white blood count of 10,000 or 11,000. This is especially apt to be the case where the resisting powers of the individual have been greatly weakened by the virulence of the infection.

Temperature.—We have been taught in the past that the presence of temperature is of great importance in making a diagnosis of peritonitis, but I have found that this is as apt to lead one astray as reliance upon a high blood count. Some of the most septic cases have a temperature below 100, so that at the present time, if the temperature is 102 to 104 I regard it as of confirmatory value but not an essential in making the diagnosis.

Pulse.—This, in my experience, is a most reliable evidence of the existence and spread of a peritoneal infection. In very septic cases it is extremely rapid from the first and in such cases the prognosis is bad. As a rule, if one has had an opportunity to observe a case during the first twenty-four to thirty-six hours a gradual but steady increase in the pulse rate will be noted. This is of great value and taken in conjunction with the spread of muscular rigidity and tenderness the history, recurrent vomiting and gradually increasing abdominal distension is sufficient to enable a diagnosis to be made in the majority of cases that a peritoneal infection exists. I can warmly recommend taking the rectal temperature of all abdominal cases, since there is often a difference in from one to three degrees between this and the mouth temperature.

TREATMENT

Preparation of Patient.—In all cases operated on where there has been repeated vomiting it is best to wash out the stomach immediately before operation, lest the patient vomit and aspirate so much of the vomitus as to drown him. The best preparation for the field of operation is painting the abdominal skin with iodin immediately before operation. I prefer ether as an anesthetic except in extremely septic cases where I have often succeeded with local anesthesia.

Incision.—In the majority of cases and in all of those operated during the last six years I have employed the Lennander or Kammerer para rectal incision from the umbilicus downward. On opening the peritoneal cavity I regard the following as evidences of a diffuse peritonitis. If there is no walling off of the pus as far as the eye can see when the edges of the incision are retracted, and the peritoneum has lost its luster, is rough, hyperemic or diffusely reddened or shows punctate hemorrhages, I regard this as sufficient evidence of a peritoneal infection. I believe it is folly to quarrel and not to call such cases free or diffuse, if every corner is not filled with pus. In the first place, it is unjust to attempt to expose every portion of the peritoneal cavity, and if there is no walling off in the immediate vicinity of the incision or

rather of the source of infection one can assume such a condition in other portions of the peritoneal cavity. In extremely virulent cases there is but little free fluid and but few visible changes in the peritoneum. The presence of fibrin is characteristic of a peritonitis of many hours' duration. No effort is made to either sponge away any of the pus nor to wash it out, but search begun for the atrium of infection by first examining the appendix, then the female adnexa, the stomach, duodenum, and gall-bladder. A visible perforation of a viscus can no longer be considered necessary for an organ to act as the atrium of infection. In seven of my forty-two appendiceal cases there was no visible perforation, and this is a frequent experience with other surgeons. An area of gangrene of the appendix or gall-bladder will also allow microorganisms to pass through without a visible perforation. The appendix should be removed as rapidly as possible and a perforation of the gastric or duodenal ulcer sutured. It is not always possible to do the latter, and in several of my cases it was necessary to content myself with a single suture through the serosa, of catgut or silk holding a strip of gauze over the seat of perforation, because of the greatly indurated character of the walls of the duodenum and stomach in the vicinity of perforation. In perforations of the gall-bladder it is inadvisable to attempt the removal of the organ but simply to drain it with a rubber tube and to pack gauze around it. I am not in favor of performing gastrojejunostomy as recommended by Deaver in cases of duodenal ulcer perforation. In cases of suspected salpingitis, it is advisable to operate through a median incision and to be as conservative as possible in the removal of the inflamed adnexa. After sealing up or removing the source of infection I pass the left hand over to the suprapubic region and establish drainage in the median line (Fig. 1.) through a stab-wound as recommended by Dr. Van Buren Knott of Sioux City in 1908. Since employing this method of drainage I have operated on thirty-one cases with six deaths, two of phlegmon of the abdominal wall a number of weeks after the operation; two were operated on on the third day of a very virulent infection, and one baby two and one-half years old was operated on in almost in extremis and died three hours after the operation. The remaining twenty-six cases were as a rule, operated during the first forty-eight hours and speak volumes for the value of suprapubic drainage. I use a rubber tube inserted down to the cul-desac of Douglas and leave it in place for forty-eight hours, then it is gradually pulled out and a strip of rubber tissue used for several days longer. The original pararectal incision is closed in layers, the peritoneal completely and the rest of the abdominal incision also with the exception of inserting a split rubber tube from one end of the incision to the other in the subcutaneous and subaponeurotic spaces. This completely eliminates the possibility of an infection of the abdominal wall from which two of my earlier cases died. I have attempted the use of iodin in the wound after the close of the peritoneum without success.

Postoperative Treatment.—I am a strong advocate of the exaggerated Fowler position. We raise the head of the bed to an angle of about fifty to sixty degrees by the use of a special ele-

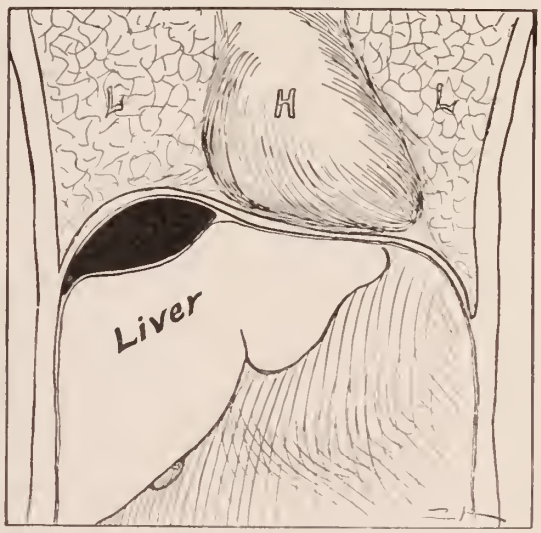

Fig. 4.—Subphrenic abscess (right-sided) following appendicitis.

vator made by the Hospital Supply Company of New York, and employed by us in the Michael Reese Hospital for the past fifteen years. I find that my results are equally as good by giving six ounces of tap water per rectum containing 2 per cent. bicarbonate of soda and 4 per cent. glucose to combat acidosis, as by continued proctoclysis. Very little liquid is given by mouth for the first forty-eight hours. One of my first cases died of acute gastric dilatation due to giving too large a quantity of liquid while the stomach musculature was still in a paretic condition. The bowels are moved with enemas given once or twice daily and the urine examined daily to combat any uremic complications. The most important postoperative complications are acute gastric (Fig. 2) dilatation, the encapsulation of pus between

adjacent coils of intestine at some distance from the point of drainage, phlegmon of the abdominal wall, infections of the veins of the liver (Fig. 3), subphrenic abscess (Fig. 4) and ileus. In other words, eternal vigilance is necessary even after operation. The appearance of fever should lead at once to the search for a subphrenic abscess. In one of my cases of duodenal perforation it was necessary to insert an exploring needle eight times before the abscess was found and successfully drained.

RESULTS

In my fifty cases there were thirty-nine recoveries, that is a mortality of twenty per cent. Of appendiceal peritonitis cases there were twenty-six operated on during the first forty-eight hours with five deaths. During the late period, that is, after forty-eight hours, sixteen cases were operated on with four deaths. Of the deaths in the early cases one was due to acute gastric dilatation after the patient had been pronounced out of danger; one was due to pneumonia, three weeks after operation after the patient had been up and about; and one to phlegmon of the abdominal wall three months after operation. The remaining two cases died of acute sepsis within the first twelve hours after operation. Of the late cases three were operated on too late to be benefited by operative interference. One died of phlegmon of the abdominal wall. Thus only five out of the forty-two died immediately after the operation, and all of these were extremely septic cases, which we are destined I am afraid, to lose no matter what method we employ. If these cases had been operated on during the first twenty-four hours I am certain we would have been able to save four out of the five. Thus, my mortality, I am confident, will in the future not be more than 10 per cent. I have recently refused to operate cases which were so thoroughly septic that an operation would be of no benefit, but rather throw discredit upon surgical interference in general in appendicitis cases, and discourage friends of such patients from being operated in time to be saved. In such advanced cases the starvation treatment gives the best results. Of the remaining cases there was one gall-bladder perforation with recovery; two duodenal perforations both recovered; two gastric perforations, both recovered, and three cases of acute salpingitis and peritonitis with two recoveries.

I believe that if the diagnosis, at least of an "acute abdominal crisis" is made in the first twenty-four to forty-eight hours, and the case operated on quickly with but little damage and no evisceration that our mortality in the future need not be more than 5 to 6 per cent.

DISCUSSION

Dr. M. F. Porter, Fort Wayne: If I were inclined to be at all pugnacious, Mr. Chairman, I would ask you by what right you presume to vary the program, as I note you were to open the discussion. I suppose it is on the general principle that the fellow that comes last has the best chance. However, your explanation is accepted.

The first point I want to make is this: Every individual with a belly more or less filled with pus is not the victim of a diffuse, much less a general peritonitis. The object should be to make a diagnosis before the peritonitis is diffuse. The guts may be bathed in pus, but there may be no peritonitis beyond the immediate vicinity of the offending tube or the offending appendix. Cases operated on under these circumstances are usually alluded to as being cases of diffuse peritonitis. Rightfully, they are no such thing. They are cases of acute, perforative lesion of one organ or another which in the course of a few hours will become peritonitis, provided your patient does not die with toxemia before that time comes. These patients only need to be drained properly, promptly I should say, and they all get well. The point is that the diagnosis should be made when the accident has happened and before real infection of the peritoneum has arisen. "Where shall I look first," the Doctor asks. Look where you please, if you do it quick and don't look too long.

The essential thing in a peritoneum bathed in pus is to get the pus out. The getting out of the appendix, the getting out of the tube, or the getting out of the gall-bladder is a matter of very secondary importance, provided you want your patient to get well. The thing is to get the pus out, and the most important thing is to do that. Take the matter of perforated duodenal ulcers, for instance, and that illustrates very well a contention that I made fifteen years ago before the American Medical Association, to the effect that the man who always looked for the appendix with the idea of getting it, that the man who always looked for the perforation in the gut with the idea of sewing it up, was the man who was going to lose a whole lot of patients that might have been saved by the simple introduction of a tube down to the proper area for drainage, then being left alone.

I heard Dr. Morris say a few days ago, "Now what are you going to do with these cases?—and that illustrates the point that I wish to make—that come into the hospital in such condition as Dr. Eisendrath describes as being fit for the undertaker rather than the doctor, what are you going to do with them? Open their bellies as quickly as you can, in as few seconds as possible. You hear, as Dr. Morris expresses it, you hear the whistle, you don't know exactly where it is coming from and you don't care, but you follow the whistle to the point it is coming from, stick in your drainage tube, sew up your belly or leave it open to drain, and the patient gets well. "But," says the doctor, "here are some cheese sandwiches up here and there is some ham down there, and probably there are some pickles over here." Never mind, the patient himself will take care of that if you put in the drain and let him alone. And that is what happens. Those are the moribund people that under those circumstances get well, and those are the moribund patients that you get results with. Now, when you want to remove the cause of your peritonitis, then you bury your patients in larger numbers than necessary. You have to bear in mind that what you want to do is to drain. Your patient is dying from a toxemia, and will die from it unless you drain; if you do, he will not.

There is a great deal of difference, too, between an individual suffering simply from a diffuse peritonitis and the toxemia arising therefrom, and the individual that is suffering from a bacteriemia that has its origin in peritonitis. Of course, the drainage of an abdomen or any other pus cavity is not going to cure a very large percentage of cases of bacteriemia. That goes without saying.

I do not care anything about the temperature in these cases of abdominal crises of this sort to amount to anything; in fact, I think the thermometer has killed a great many more patients with peritoneal surgical involvement than it ever saved, and, indeed, I don't think it ever saved any, but I do think that it has killed a great many. If I have been told once I have been told a hundred times, "Doctor, this patient never had a temperature of any degree and I cannot think that he had any peritonitis." So I want to emphasize that. The pulse is of value; if it continues going up, it means that trouble is going on.

I cannot quite agree with what the Doctor says of the blood count. I think that is of great assistance, but you must not forget that if the patient is extremely toxic or reduced he will not respond any more than a patient with advanced tuberculosis will respond to a diagnostic test with tuberculin.

Now, about the epigastric artery. I tried to emphasize some years, or some months ago, at least, the danger of a near midline incision in septic cases, not because the epigastric artery is here—don't misunderstand me—but when you go close to the rectus or close enough to open the sheath, what do you do? You open the cellular layer of the rectus, you make a cross incision (illustrated on blackboard) with the two coming together in the midline. What do you do? You open up this space, and tear down this until it drops down like that, you loosen cellular tissue, it becomes filled with pus, soiled, septic material gets in, and if you don't look out you will get a secondary hemorrhage from the epigastric artery though you have never touched it.—Perhaps, you have mauled it a little with your retractors—and it is a point to be borne in mind if you would do all that is possible to do for the good of your case.

If you are going to use any fluid in the bowel for the purpose of having the patient absorb it, remember, other things being equal, it will be slowly absorbed, absorbed in small quantity in proportion as you add anything to it to increase its specific gravity. That is according to a physical law. Saline solution is better than sterile water, better than bicarbonate of soda, provided you are looking for rapid absorption.

I quite agree with what the Doctor said about the diagnostic importance of rigidity of the belly.

I would like to call attention to one other point, however, and that is pain. A great many cases of acute abdominal trouble which eventuate in more or less general or diffuse peritonitis, of purulent character, come on with diffuse abdominal pain which will finally locate itself in the region of the gall-bladder, the region of the duodenum, the region of the appendix, or in the region of the sigmoid, depending upon whether the perforation or the injury, if you please, occurred at the stomach, duodenum, gall-bladder, or if you have a diverticulitis occurring in the sigmoid, but where this acute pain originates and spreads over the belly, the tenderness together with the pain is very apt, indeed, in a few hours to come down over the site of the original trouble.

Doctor, this man that they gave the champagne to. (The Doctor was obliged to catch a train.) I wanted to ask him what this man's

nationality was. I think that might account for his death. He was, probably, German, and they gave him champagne when he should have been given beer.

Dr. M. F. Porter, Fort Wayne: I want to rise to a point of order. Dr. J. R. Eastman is down to open the discussion of this paper. I will be pleased to take the chair while Dr. Eastman goes on with the discussion.

Dr. J. R. Eastman: The Chair felt that it was just a matter of courtesy and common decency and kindliness, as the hour is so very late, that he should give way to others who are here present and are so much better prepared to discuss this paper than he. So by your leave I will yield my place on the floor to others who are here. It does not seem at all just for the Eastmans to take so much of the time in discussion when they have been honored in being selected by you to preside and to act as Secretary. So, if you can conceive of such a thing as my being modest, I will submit that is my reason, Dr. Porter, for not preparing on the subject of general peritonitis. May I be excused?

Dr. Porter: Certainly, Doctor.

Dr. H. O. Pantzer, Indianapolis: I know that the expression was owing to the pressure under which Dr. Porter spoke when he referred to the thermometer as a killing influence. Today, I heard of the thermometer as a very active factor in treatment when a friend recited the case of a negro who owing to abdominal conditions had been left without any nutrition and when he was asked finally to confirm the statement that he had had nothing given him, said, "Well, no. You don't give me anything but a little glass to suck." So, I presume, in that case, we have another instance where the thermometer came in as an entity. However, I wish to contradict Dr. Porter in his statements regarding the temperature. The temperature in my experience is of great value. Now, if you have a case of perforation, say of the stomach or the duodenum, or, if you wish to differentiate from a case owing to an inflammatory condition, like an appendicitis, you will find your temperature is by mouth perhaps normal or even subnormal, but by rectum you will have it normal in the case of a gastric perforation, whereas if owing to a gangrenous appendix you will have two, three, four or even five degrees by the rectum. I have been advocating the use of the rectal thermometer as a means of differential diagnosis for many years in such cases, and am glad to have such a substantiation as was given here by Dr. Eisendrath and as given by an oculist, Lewis, I think, of Buffalo, at the A. M. A. meeting, when he referred to the difference in registration on the eyeball and in the mouth, a difference there quite marked.

Palpation was referred to. Palpation should be done as by the man who expertly palpates, who, for the time being a blind man, substitutes his palpatory sense for his eyes and he palpates not as ordinarily we do by deep pressure, but he does it with the utmost delicacy, seats himself by the bedside, as the Doctor indicated, and touching as you would the keys of the piano, just barely on the surface, it is remarkable how easily you will notice the rigidity under your touch where the musculature reveals a tender spot underneath.

Dr. G. W. McCaskey, Ft. Wayne: Dr. Eisendrath has given us some exceedingly good points, and probably he would have given us better statistics if he could have controlled fully the nursing and the after-treatment. It is not always that we know just what takes place after we have operated on a case. There are four or five points, all told, that go to make up the successful treatment of this kind of a case. In the first place, there is, as the Doctor has shown us, much in the opening and in effective drainage, in the Fowler position. And in the Fowler position, you must remember, there is the fixed upright position, not the fixing up again after they have slipped down during the night, but the fixed position all the time, and the Doctor just barely alluded to it, not the hammock but the trapeze in which the patient sits so that he cannot get away and is upright, bending does not take place in the lumbar spine, but it is held upright. Then there are two other points that are very important. The Doctor would have told us those, too, if he had not got through so soon. Those are, no food and no physic. Many a patient has died from a dose of salts, many a patient has died because after the third day or thereabout it is a common idea that he should have a dose of salts, or a Seidlitz even, or cascara. When should you give physic? Any time later. Next summer. Wait. There is no hurry. The bowels move themselves in the course of seven, eight or nine days in almost every one of these cases, if you simply give no physic at all. If you give no food at all there is no gas, and, therefore, no gas pains. Gas pains from the use of anesthetics having nothing to do with it. Gas comes from the intestines and is generally from the material you put in there, and that is food. Leave it alone. The patient does not need it. It causes peristalsis, which picks up pus, rolls

it into corners where it does not belong, spreads your disease, and the patients die. I have seen patients whom I knew died from physic they got on the third day when they were getting along all right. I just want to emphasize this fact that if the friends or relatives insist, and they will at times, on a dose of physic or on food in the first week, that will often be the turning point, and you will go away and wonder what was the matter, why your case that was doing well should have so unaccountably died. If you trace it up, you may find that some one gave something which did not belong there and that was the cause.

Dr. Chas. Stoltz, South Bend: This is one of the great subjects that will always be threshed over and we will never quite get together on all the points. I wish to emphasize and lend my earnest support to what Doctor McCaskey has said, that salt and castor oil have no business around a case of intestinal obstruction from whatever cause, or with a diffuse peritonitis, or whatever it may be, either before or after the operation. I have had my fingers burned so many times that I am almost ready whenever a man comes to me who has been giving a case of strangulated hernia or appendicitis or any other abdominal condition physic good and hard for a number of days, to say that I would rather be excused and let some one else have the funeral; because you are going to have an intense paralytic ileus and your patient very likely is going to die in spite of anything you can do

I would like to mention one thing that has been very helpful to me. Dr. Eisendrath spoke very thoroughly in regard to diffuse pain and the recognition of points of tenderness. There is a little aid that I have used for many years which has helped immensely in the localization of the pain. When you cannot make out quite whether it is the gall-bladder or the liver or the appendix or some other point that is at the bottom of the trouble, give your patient a good dose of morphin, not with the idea of stopping his pain, but the diffuse pain will lessen and you will soon get your point of tenderness. You are not doing your patient any harm and you can make your diagnosis far more accurately. Then you can follow your whistle in the right direction, can get your whistle more nearly located than you can in any other way.

Now, there is, I think, still a place for flushing in some cases, in some abdomens which are filled with pus and debris, provided you do not pour the flush water on top and let it run off. If you will insert a tube down into the culde-sac and put the water down and let the stream go pretty hard and get into all the coils and interstices and other places in the abdomen where there is any good reason for it, where there is debris and pus, and let the water flush it, that you will be surprised at how much is carried out, and I assure you, gentlemen, that a little salt solution in the abdomen among the coils is a far safer thing to have there than pus, and I think it is a far safer thing than to attempt to wipe out the pus with pledgets of gauze and sponges. I think if there is anything that we want to commence to keep out of the abdomen pretty soon it is a lot of gauze packs and other debris that help to irritate the peritoneum and make it far more susceptible to absorption. I am glad that Dr. Eisendrath recommended tube drainage. You know whenever we want to stop anything from coming out, any fluid, we pack it with gauze, and when we want to coax it out we also pack with gauze. Now, it looks to me if you are going to drain, and, as he said you cannot drain the abdomen for more than a few hours anyway, Yates and other experimenters having shown that drainage does not last over more than a few hours, you should put in a tube and make that pretty smooth, leave no sharp edges on it, because they mean added trauma, make it as smooth as possible, and if you want to put a little filiform drain inside so as to keep it clean it will do very well, but you hardly need that, because there will not be much use for the tube after twenty-four or forty-eight hours. The intestines will have movements again, and soon there will be nothing but a channel there without any collateral drainage.

(Why leave it in a week or ten days?)

You don't want to leave it in a week or ten days. It does no more good after twenty-four or forty-eight hours. It is a foreign body after twenty-four or forty-eight hours, and it is causing damage after twenty-four or forty-eight hours. It is a constant source of possible necrosis.

(Why not remove it the next day?)

Remove it the next day or two. Sure! That is the only use you have for it. Our drainage has been illogical to a very large extent.

Now, there is another thing that I think is of great importance. The essayist and the other speakers have talked of the value of relieving the stomach of its contents or of its dilatation. There is just as much reason, and very properly, there is just as much reason for relieving the intestines of their gas. Keith says, and I think very properly, that an abdomen that

is closed, a distended abdomen closed up, is not a well operated case. Here you have enormous coils coming out through the wound. The first and best thing to do is to relieve them. You can do that very easily. You do not traumatize your patient very much by picking up one of the most prominent coils, nicking it with a cautery or knife and inserting a Monks' tube. Now, a Monks' tube is simply a glass tube as thick as this stick or not so large, depending on the contents of the intestine. If there is much gas, it does not make much difference how large a tube you use, but if there are few contents in the guts or ileus a glass tube about 18 inches long, curving down and sealed up at one end so that it will slip in easily and so that it cannot make a valve, will bring the best results. You can thus relieve the intestines. But you put these coils back in there without relieving the distention and you are going to have much more trouble than you would have had if you had relieved that distention.

Dr. Leonard F. Schmauss, Alexandria: I was very sorry that this paper was not presented before a general meeting. I think every physician, every general practitioner attending this convention ought to hear this paper on peritonitis, because the subject really comes into the hands of the general practitioner at the beginning and, as a general thing, remains there until it is too late for relief. You may say, "Well, it will happen only once in a while." I had three cases within the last few months from the same practitioner. He sent these cases to me five and six years ago, and he will send them again. On the other hand, I know of one case that died last year which was attended by one of the best surgeons of that city and no diagnosis was made until the postmortem disclosed what it was. It is not so easy in every case to make a positive diagnosis. Only recently, I saw a case in which the attending physician was in doubt. At the time I first saw it, I said, "Undoubtedly this patient has peritonitis and ought to be taken to the hospital at once." It was a case of appendicitis, but did not begin with pain—at least we could get no history from the patient or his daughter that it began with pain. It began with diarrhea, and the patient had diarrhea for two days. On the third day, he began to have a generalized abdominal pain. Now, what caused the diarrhea in this case? Intestinal obstruction. Probably inflammation going on in that appendix drew the terminal end of the ileum over to the seat of inflammation and caused a kink and intestinal obstruction. It was this obstruction that caused the diarrhea, after this inflammation had caused the obstruction. Under these circumstances there was no diagnosis made of appendicitis in that case, on account of the absence of pain. On the third day perforation took place with localization of pain, tenderness, rigidty and vomiting. He vomited, also, the first day. Diarrhea began, and the question came up in that case whether it was not a case of coprostasis or impaction of the cecum, and the attending physician would not agree to the operation unless an attempt was made to relieve the bowels. I told him, "All right, that is the first indication, but don't be two or three days about it. The patient ought to be taken to the hospital this morning. If no decided improvement takes place he ought to be opened this afternoon." But the injection took place, some gas and stool passed, and so he was doing well. On Sunday, at 4 o'clock, I was called again, and while the patient had a pulse of eighty the day before it was then one hundred and twenty, and there was very marked distention. It was probably one of those cases that Dr. Eisendrath would have claimed should not be operated, but put on starvation treatment, but what would that treatment do in this case, and here I would like to ask Dr. Eastman or Dr. Porter to bring out in the closure of this discussion what should be done with cases of immense distention, where distention is not due to paresis of the bowels from inflammation, but is due to obstruction. It will take place in not a few cases—a kink will take place either at the site of inflammation at the cecum or the appendix or amongst the loops of the ileum, down in the culdesac, or elsewhere. What are we going to do? The Doctor just said, "Don't put them back in the abdominal cavity without relieving the distention." I do not believe that a tube put in there will let out all the gas, and you cannot take an hour or so and go over the whole length of the intestines and press out the gas.

(It takes only one minute.)

I have not found it so. I think it is impracticable, but I will try it on the next case of the kind. I do think that in these cases we should relieve not only the gas, but the contents. That will necessitate making a dozen or more punctures, and such a procedure takes time, it makes for infection, etc. I think it is better not to open these cases, to put them on the Ochsner treatment. I should like Dr. Eastman to bring out, too, whether in these cases it would not be better to try a temporary enterostomy to relieve the distention.

As to the moving of the bowels, I never lost a patient by opening up the bowels, but I have lost patients by not keeping them open.

Dr. J. R. Eastman, Indianapolis, closing: If I may reply to Dr. Schmauss' question, I would say that he has introduced in his discussion some subjects, or, perhaps, I should say some phases of the question that Dr. Eisendrath did not discuss. If he had diagnosticated obstruction from any definite cause, of course, he would have advocated proceeding at once to relieve that obstruction. I think there can be no question of that.

THE MANAGEMENT OF FEEDING CASES IN INFANCY*

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Since social conditions are unfavorable for the production of mothers capable of nursing their offspring and it is universally admitted that the best food for infants is from strong, healthy women, artificial feeding is a necessity, and the duty of selecting a substitute for human milk devolves on the medical profession. When looking for an artificial food, therefore, we take human milk as a guide, it being Nature's product, and select a food that most nearly resembles it.

Without discussing the social conditions it is the purpose of this paper to make a claim for cow's milk as such a substitute, to outline the principles of feeding, to present a simple plan for milk modification, as well as formulate "ways and means" for the general management of feeding cases, reviewing some evil practices common amongst the laity, and, I regret to say, some physicians, in the care of infants.

Cow's milk, as shown by statistics, is an important part of diet because of the fact that milk and cream together furnish 16 per cent. of the total food of the average American family. In various parts of the world other kinds of milk are similarly used; buffalo's milk in India; camel's milk in desert countries; llama's milk in South America; goat's milk commonly in the mountainous districts of Europe, and mare's milk in certain parts of Europe and central Asia, the two latter being more like human milk than cow's milk in that the curd is more flocculent.

Cow's milk contains about the same total solids and fat as human milk, though it carries more proteid and less milk sugar, with larger fat globules, and, in proportion to the albumin, more casein, which is said to form a firmer curd that dissolves slowly by the action of the digestive fluids.

When milk is heated to a high temperature (212 F.), certain chemical changes are said to take place. The character of the fat globules is altered, the milk sugar is caramelized, the lime salts are converted into insoluble compounds, the proteids undergo coagulation and other changes, certain natural ferments believed to be of value in digestion, are destroyed —all contributing to an alteration in the flavor and taste of the fluid. The deficiency in milk sugar may be supplied by adding milk sugar itself, or some other digestible carbohydrate, while the casein may be made more easy of digestion by chemical or mechanical modification.

Nothing can exactly reproduce the proteids of human milk, the protein compounds being the important nitrogenous ingredients which are indispensable in the formation of body tissues and fluids, in fact, the only elements capable of replacing nitrogenous waste, and this probably is the most difficult feature in milk modification.

Whether the changes produced by the cooking of milk affect its digestibility is a point on which authorities differ greatly. Pasteurization (the heating of milk to 140 F.) is very extensively practiced, and the destruction of certain pathogenic organisms may offset other deleterious changes resulting from the process. Many claim that infants fed for a long time on boiled milk show a greater tendency to scurvy and rickets than when raw or pasteurized milk is used. Rachford says: "Heat may act by destroying active biological properties of the food which are necessary in infant metabolism; that food that has been biologically destroyed by heat, as in the sterilization of milk or in the preparation of proprietary foods, is responsible for over 90 per cent. of the cases of infantile scurvy." The percentage of cases of scurvy that has occurred in children fed on breast milk and raw cow's milk is exceedingly small.

All things being equal, that is, that the cows have been shown to be free from tuberculosis, that the milk is clean, fresh, and with the

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minimum bacterial count, and other conditions consistent with the modern standard of scientific and hygienic "milk handling," and with the belief that said product has a live principle of biological and chemical value in the body metabolism, together with the fact that the writer's cases have shown no ill effects from its use, he favors raw cow's milk as the permanent article of diet in infancy. Few bacteria are normally found in milk within the udders of clean, healthy cows, and the amount in milk of a given age varies with the conditions; that from clean, healthy cows, with freshly washed udders, milked into well-scalded pails, in a clean place, free from currents of air, by persons of clean hands and clothes, and quickly cooled and carefully handled, may contain few, while milk from ill-kept animals untidily handled in a dirty place must contain enormous quantities. Under the latter conditions, the milk is often rendered exceedingly dangerous by the presence of colon, tubercle and typhoid bacilli, and other infectious organisms, and though the milk is treated with chemical preservatives (as boric acid, salicylic acid or formalin) which, in large quantities may kill some, but not all, the most dangerous, such as tubercle bacilli, have been known to resist large quantities of these preservatives. Thanks to the establishment of pure-food laws, to the vigilance of public health officials, and to the interest manifested by honest dairymen, the consumer is guaranteed a relatively pure and wholesome product.

Much depends on the care of milk in the home. The responsibility of the producer ceases when he delivers his product on the front door step. If the bottle remains long in the sun, the milk spoils. It should be poured into a clean vessel freshly scalded, kept in a clean place free from dirt and flies. It should be kept covered to exclude not only dirt and flies, but also the flavors and odors which it so easily absorbs, and if held at a temperature of 45 F. should remain sweet from twelve to twenty-four hours. Often, when milk spoils, the fault is attributed to the product itself, when in reality the ice box, though relatively cooler, is above 50 degrees, a temperature at which unfavorable changes take place in milk. It is essential, therefore, that milk should be clean, even if pasteurization or sterilization is to be employed, and it should be *fresh*, since the rapid increase of bacteria lends an element of danger to it when old.

With cow's milk almost any condition may be met, save in a few cases of milk idiosyncracy, and it has been suggested (and my own experience confirms this) that milk from common cows (Holstein and Ayrshire) rather than from highly bred animals (Alderney or Jersey) is preferable because the percentage of fat in the latter is higher and less easily digested. Regardless, however, of the varying degree of richness in milk, if it is desirable to give high percentages of fat, top milk may be used. If a minimum amount of proteid is necessary, whey obtained from whole milk, or, if lactalbumin without fat or casein is indicated, whey may be made from skim milk, thus securing any percentage of fat or proteid. Cow's milk, being within the reach of all, has become the most common substitute, and may be modified to resemble very closely human milk.

Since artificial feeding has become so extensive, and because of the fact that many failures have resulted from feeding cow's milk unchanged or improperly modified, and for commercial reasons, numerous preparations have been offered as substitute foods for human milk. These substitute foods, some with varying amounts of carbohydrates or other constituents, others made of farinaceous materials with evaporated milk, all have their fields of usefulness. They are the so-called "dead foods," which, when prepared for consumption, contain too high percentages of carbohydrates and too low percentages of fats and proteids, thereby making them unsuitable for permanent use, as evidenced by the experience of foundling hospitals, together with the teaching of all medical authorities.

Even mothers are awakening to the fact that proprietary foods (used as foods per se), are chiefly responsible for the digestive disturbances, with fermentation of the gastro-intestinal tract; and they are giving less credence to the advertisements of the proprietary food vendors, with the pictures of their rosy-cheeked babies that have thrived more in spite of, rather than because of the special brand of food to which credit is given.

The majority of feeding cases are brought to the physician with a disturbed digestion, accompanied with either fermentation or putrefaction, resulting from improper food. This fact should be kept in view in the selection of an artificial sugar. Lactic fermentation is common, as for example in the ordinary souring of milk in which numerous varieties of bac-

teria convert the lactose of the milk into lactic acid. Now, the bacteria which produce lactic and butyric fermentation, according to several authorities, are ever present in the human intestine. Of the three disaccharides—lactose, saccharose and maltose, the former is especially prone to undergo lactic fermentation, while there is ample authority for the statement that "maltose is incapable of direct fermentation of *any* kind." According to Finkelstein, "milk sugar is the cause of fermentative dyspepsias of infancy." Rachford, in his recent work says: "Maltose has for many years been considered one of the most valuable of infant foods in modifying formulas; but the German school in the last few years has called attention to the value of this sugar as a substitute for milk and cane sugar in conditions of intestinal fermentation. It is more easily assimilated and more readily absorbed than lactose or saccharose, and it may be taken, therefore, in larger quantities without producing sugar fermentation. The ferments which convert milk sugar and cane-sugar occur exclusively in the intestinal canal, so that if the digestive process is not completed in the intestinal tract the partially converted sugars may be absorbed and produce a sugar intoxication. While on the other hand, the ferment which converts maltose occurs not only in the intestinal canal, but in other parts of the body, so that, if partially converted maltose is absorbed, sugar intoxication is as a rule prevented by the further action of this ferment after this form of sugar has been absorbed."

In addition to numerous German writers, we have the support of Rotch, Holt, Jacobi, Chapin, Kendall and others in the views just mentioned, and our own clinical observations in private, hospital and dispensary experience have given us ample proof of the superiority of malt sugar (maltose and dextrin) as the carbohydrate in artificial feeding.

While the principles now known, and generally conceded to be necessary to success in infant feeding are familiar to all, let us freshen our minds with a review of the more important.

A knowledge of the caloric standard is of great value.

Spiegelberg says: "From calculations made by different authors it can be said that a strong breast-fed baby in the first two months consumes daily about one-fifth of its body weight in milk. In the second quarter of the year this diminishes to one-sixth or one-seventh. In the latter months to one-eighth or one-ninth of its body weight." This is in harmony with the views of Heubner, "that infants consume daily during the first three months an amount of milk equal to forty-five calories per pound of body weight."

If one is familiar with the foregoing, it should enable him to provide his patient with a formula that contains the requisite number of calories. And yet, as one writer puts it, "an infant should never be allowed to starve, because it fails to thrive on the number of calories which a mathematical calculation awards it."

The capacity of the individual infant's stomach should be taken into account and the quantity of food adjusted to suit the case. To feed in ounces beyond the stomach's capacity is attended with grave danger. The capacity at birth is about one ounce, at three months three ounces, and at six months six ounces—at least approximately these amounts.

In connection with the subject of calories and overfeeding (the latter being a relative term), it may be remarked that environment (hygienic conditions) exercises an influence. A well-known writer, after conducting a series of calorimetric experiments, makes the following observation: "That the wearing of a bonnet or stockings effects an economy of a certain number of calories. That if an infant, lightly clothed, given a bath every day, taken out in the open air for many hours each day, given full opportunity for muscular exercise, stimulated by the vitalizing influence of light and sunshine, requires 20 ounces of milk in the twenty-four hours, how many ounces of milk should be given to an infant of similar age and weight that is wrapped in innumerable thicknesses of clothing, kept in dark, stuffy rooms, seldom taken out of doors, seldom given a bath, and hampered and impeded in all its muscular movements."

While nutritional requirements must be borne in mind, it should be remembered that excitement, overfeeding and atmospheric heat, lower body resistance and thereby lessen the baby's digestive capacity, and that there is an immediate demand for a cessation of feeding or a diminution of food under such conditions. A failure to recognize this feature may explain the cause of frequent relapses when there has been every reason to believe "all is well." The following case is an illustration:

Baby H., aged 6 months—was the recipient of varied attentions at an evening company and was kept awake far beyond his customary bed-

time, when the usual ten o'clock feeding was given. The child was exhausted and its digestive capacity diminished, resulting in the ejection of the entire meal.

Numerous similar instances have come to our notice, and in a few cases serious consequences were averted only by timely recognition and prophylactic measures. Regular intervals of feeding must obtain in all cases, though the time between feedings should be adjusted to suit the infant's age, weight and digestive capacity. Long intervals (three or four hours), are preferable, and the babe should be awakened for its meals until a regular interval is established.

The baby should have rest and quiet. The delicate, sensitive, nervous mechanism of the babe, with its equally impressionable digestive system, demands quiet surroundings, and the customary coddling, so injurious to the child, should be reduced to the minimum.

Fresh air is very essential. Northrup says, "It is quite as important to modify the baby by rest and fresh air as it is to modify the food."

For convenience feeding cases may be divided into two classes.

First, the strong, vigorous, well-nourished infant reflecting all the elements of a splendid physical ancestry.

Second, the frail, emaciated, ill-nourished babe, born of an alcoholic, syphilitic, tuberculous or otherwise vitiated constitution — afflicted with heredity, as well as the infant that develops some of the disorders of nutrition, as the victim of environment. Many of the former class escape the medical eye for the reason that their higher powers of resistance enable them to eat "any old thing" and "get by," but a few of these and all of the second class belong within the realm of "feeding" cases, differing only in degree, as to the impairment of their digestion and the processes of assimilation.

It may be of interest to mention the symptoms of some of the more common forms of digestive disturbance. "Habitual regurgitation, constipation with gray, dry stools, or loose movements with small soft curds and irritating urine with an ammoniacal odor—indicate an excess of fat. Large, tough curds, putrid, loose, brownish, alkaline stools, are symptoms of intestinal indigestion, and the trouble should be attributed to an excess of casein.

"A bowel disorder, accompanied by a watery, acid, non-putrid diarrhea, and much gas formation, at once gives us a hint as to the presence of too much carbohydrate, especially sugar." (Rachford.)

Other symptoms pertaining to the infant's actions and condition, which are of great diagnostic value, are embodied in the following group, viz., crying, resting, sleeping, spitting, colic, stools. If the baby is *not* crying; if it is resting; if it is sleeping; if it is *not* spitting; if there is no colic, and the stools are normal—the symptom complex is arbitrarily classified by the writer under the term "behavior," which is said to be good. It is very necessary to possess this information; in fact, the conduct of any case is incomplete and unsatisfactory without it.

The home modification of cow's milk is almost universally used in infant feeding, and much difficulty has arisen in an effort to adjust complicated formulas, with a view of fitting a mixture of special percentages to all cases.

While the greater part of fat in cow's milk, as in human milk, is neutral fat, and while the volatile fatty acids are in much larger quantities; and while the principal proteid compound (casein) in cow's milk is greater, and the lactalbumin less than in human milk, thereby rendering these solids less digestible than those in human milk—dilution with water, in so far as digestibility of the fats is concerned, reduces the difficulty to a minimum, and the addition of the malt sugar solution, which supplies the deficit resulting from the use of the diluent, mechanically makes the casein more easy of digestion. Dilution, therefore, as the first step, simplifies modification, and the ratio of fats to proteids remains the same in any mixture.

In the writer's experience, malt sugar as furnished in Mellin's Food (maltose and dextrin) has given him better results than any other form of carbohydrate in the modification of cow's milk because it contains no free starch, furnishes alkaline constituents in the form of potassium salts, and it will break up, soften and make more easy of digestion the casein of the milk. With Mellin's Food, therefore, a 5 per cent. carbohydrate solution is made, and is the one referred to in this paper when the term sugar solution is mentioned, and though a strength of 5 per cent. is arbitrarily adopted for general use, there are times, as in cases of sugar indigestion, when it is necessary to begin with a very much weaker percentage

of sugar and cautiously increase to the normal requirement.

While the principle that each individual infant has its own limit of nutritional tolerance, so that each case must be treated as a law unto itself, an initial basic formula of one-fourth milk and three-fourth sugar solution is arbitrarily used, and then the formula is strengthened gradually, but as rapidly as is consistent with digestion, until the requisite number of calories is obtained, and the milk is increased, at the expense of the sugar solution, until the age of infant and condition of the system demand whole milk.

This formula is susceptible of many changes to suit special conditions. For instance, if fats and proteids are contra-indicated, a sugar solution alone may be given with advantage. If fats are not well borne, fat-free or skim milk may be added to the carbohydrate solution. If the nature of conditions precludes the use of fat or casein, the weakest form of proteid may be found in the lactalbumin of whey, which readily combines with the sugar solution.

If sugars are contra-indicated, whey or Eiweissmilch, in any dilution, may be used for a time. Rarely is it necessary to shift to these restricted formulae, and even then only for a temporary period, but the changes taking place in the delicate digestive mechanism of the infant during the conduction of special feeding make it necessary that one should be familiar with all features of modification, in order to meet any emergency.

While the food itself and its proper modification are all important, the "ways and means" for its administration are, in the opinion of the writer, equally essential in the so-called "feeding" cases, and they should be observed to the minutest detail. The infant's "behavior" should be analyzed, its weight taken, an initial formula determined on, and a record made for subsequent reference. This is of the utmost importance.

Many failures occur because the physician neglects the above and particularly takes it for granted that the nurse knows *how* to keep the milk sweet, *how* to modify the food, *how* to prepare the formulae, *how* to sterilize the bottles, *how* to cleanse the nipples, *how* to regulate the feeding intervals, *how* to clothe, *how* to bathe and *how* to air the baby; or that she knows *why* the baby should *not* have the bottle propped on a pillow for self-feeding, *why* the food should *not* be given too hot or too cold, *why* the milk should *not* be given too slowly or too fast, *why* baby should *not* be handled, *why* baby should *not* be rocked, *why* baby should *not* be bounced, *why* baby should *not* be permitted to use the pacifier—one of the most pernicious practices in the nursery. Therefore, it is essential, and of paramount importance that the necessary instructions in writing be given to the nurse or caretaker, and then, with her co-operation, that the physician keep in daily touch with the patient until a suitable permanent formula is determined on.

In conclusion, but with extreme emphasis, the writer would urge:

1. That with the advancement of civilization, many factors have contributed to lessen the number of nursing mothers, which is a lamentable fact, but physical, social and moral conditions have imperatively contributed to the necessity for a substitute for human milk in *feeding* the world's majority of infants.

2. That cow's milk, after scientific investigation, arduous laboratory efforts and long clinical experience, is now universally accepted as the best substitute, and when properly modified, properly administered, properly digested and properly assimilated, it will *nourish* the majority of infants.

3. That with pure food laws, well organized health authorities and conscientious dairymen, the public may have the assurance that the present high standard of cow's milk will continue, and in proof of this, it may be added that the writer has failed to get a single unfavorable report concerning the numerous dairymen of Indianapolis, who, during the past few years have furnished milk to hundreds of his baby patients.

4. That while a simple formula of cow's milk diluted with a sugar solution, as heretofore mentioned, yields satisfactory results, this alone will not suffice without the co-operation of the caretaker who must execute the physician's orders relative to the "ways and means" which include an observance of *all* hygienic and sanitary measures pertaining to infantile life, and which are the "sine qua non" in the management of "feeding" cases.

5. That since our chief aim should be the *prevention* of disease, the plan herein outlined is submitted not only as a conservative means in the management of feeding cases, but as a prophylactic measure for the prevention of some of the more deeply seated inflammations of the intestinal mucosa that have their origin in bad feeding.

DISCUSSION

Dr. E. B. Mumford, Indianapolis: Just a few points I would like to emphasize. As regards the heating of milk, I do not agree that the sterilization of milk or the feeding of proprietary foods is a cause of scurvy. The work that has been done by Dr. Baldwin—the greatest man on milk—in Albany, N. Y., has never shown scurvy as caused by sterilized milk. In Indianapolis we use nothing but sterilized milk, by the "holding" method, and our cases of scurvy are very few. In fact, I have never seen but one case of scurvy in Indianapolis in six years.

Second, Dr. Taylor spoke of cow's milk in a way that I think most unfortunate—as being very much like mother's milk. Cow's milk to my mind is a most valuable food, and must so be considered, but there is no way that I know of that cow's milk can be made like mother's milk, and I think the claim should never be made that it should be used in preference to breast milk.

The treatment of the so-called "summer complaints," intestinal upsets in children, is a subject that has received quite a good deal of consideration both by the general practitioner, and especially by specialists in pediatrics, and great advance has been made. I think a majority of physicians who received their training several years ago are absolutely losing some cases because they cannot make a diagnosis. If an adult comes in with an intestinal upset you go to work and make a thorough examination, take temperature, perhaps examine the blood, and what not. But if a child comes in with an intestinal upset, "summer complaint," you say, Oh, change the milk, give it Mellin's Food, or Eskay's Food, or something of that kind, where if you would sit down and study the case as carefully as the adult you will find it is not so hard to discover what is wrong.

Another point is that in treating these cases you must cut down the fat. That is the reason these proprietary foods have made good, they have practically no fat at all, but have a high percentage of sugar.

But the point I want to emphasize most is that you must study these cases the same as adults. You do not give one preparation to cure all diseases in adults, you work out the best for that particular case. So far as methods of modification are concerned, I do not think one has very much advantage over another when it comes to the final result. What you want to know is what you have in percentage of fat, sugar and proteids.

As to periods of feeding, we feed all infants, breast-fed or otherwise, at four-hour periods. Give them plenty of water in between times.

Dr. J. W. Kelsey, Attica: This subject of infant feeding is one that has been very near to my heart for a good many years. I was very glad to hear Dr. Taylor's paper, and want to endorse every word of it; but I want to add something to it.

The doctor did not speak very much about the working out of the best cow's milk for feeding infants. I think if we were to take a list of one hundred doctors and ask them what they use for feeding babies, there would not be 5 per cent. that would say modified cow's milk. I think I am right about that. I think fully 95 per cent. of the general practitioners feed proprietary foods to their babies; and I think that is all wrong. I think the reason why, is that the average doctor is busy, and he does not know how to modify milk, and therefore cannot tell the mothers how to do it, and these foods are safe. The reason why doctors have not taken up with the modification of cow's milk is because they think it is too big a thing for the mothers to grasp. But it really is very simple. It has been worked out that the baby needs three things, it needs proteids, sugar and fat, and that is all it does need, outside of water, up to a certain age. The doctor says at 4 months a baby will take 4 ounces at a feeding, but we can force that and give them 5 ounces, and they will not be overfed. Dr. Mumford voiced my sentiments with reference to feeding infants every four hours. I do that from the time they are born, and never any oftener. There is a good reason, it takes from three to three and a half hours for the milk to digest in a baby's stomach, and nothing should be put in until the stomach is empty.

The points I want to emphasize are these—four-hour feeding periods, and modified cow's milk every time, and you will have healthy babies, and you will cut down that 25 per cent. of deaths during the first year.

Dr. William R. Davidson, Evansville: I was forced into taking an interest in infant feeding on account of my own infants. I think Hoagland's idea, with all his laboratory tables, has turned many a mother away from the percentage feeding, and as Dr. Mumford says, while all methods are good, some are better than others, and the method I prefer above all others is that which has been introduced by Morris of Boston. It is very easy to use. I think that method can be handled much more easily than the German whole milk method.

Dr. W. D. Hoskins, Indianapolis: It is a great pleasure to hear such a presentation of the infant feeding problem as we have heard from Dr. Taylor. His years of experience have made it worth while for us to hear him, and he has demonstrated that even a man with gray

hair may keep up with the procession—and the procession does not move slowly nowadays in infant feeding.

The Germans undoubtedly taught us a valuable lesson when they impressed on us the fact that a large percentage of our feeding cases were due, not as we formerly believed, to bacterial infection, but to error in the proportions of fat, sugar and proteids in our formulas. And by the way, did it ever occur to you that this throws right back on the physician a much greater responsibility than the old idea? We could not control absolutely the matter of bacterial infection, the mother was not a bacteriologist, or even the trained nurse. But we do have a much more definite control of the food, and the responsibility is increasingly ours. I think we will not get the best results in the matter of infant feeding until we rid ourselves of this old theory that the majority of these digestive disturbances are due to some infection from without, and realize that it is some disorder due to prolonged error in diet.

As to the matter of scurvy, I shall have to side with Dr. Taylor as against Dr. Mumford. I see on an average five or six cases of scurvy in Indianapolis and vicinity each year, and practically all of them come from pasteurized milk. Unless you can impress the mother that she must feed some element in the way of fruit juices, you are bound to have scurvy occasionally from pasteurized milk. During the recent epidemic of poliomyelitis I saw many cases that proved to be scurvy, from feeding pasteurized milk or proprietary foods.

The thing that I increasingly am concerned about is the treatment of these summer complaints and the severe cases of malnutrition that follow. We had it hammered into us pretty hard ten or fifteen years ago that if we did not starve the babies we could not cure them of acute gastro-intestinal trouble. In my opinion we learned our lesson too well, and as a result we are afraid to feed these babies, and it is my observation that the very severe cases of malnutrition which follow these acute cases are due to the fact that we withhold food from them for too long a period. It is all right to starve a baby for twenty-four or thirty-six hours, but beyond that time I think we do harm rather than good and lay the foundation for profound malnutrition. It is the exception rather than the rule when, after clearing out the gastro-intestinal tract and withholding food for twenty-four hours, we should not give some simple food, albumin, water, or weak sugar solution, if the intoxication is not a sugar intoxication, and then after the second day feed skim milk or buttermilk or some fat-free food like that, to prevent these profound nutritional disturbances that follow.

I concur in the idea that has been advanced here in the discussion that a majority of our troubles perhaps comes from too high fat percentage. Most of us were educated under the old regimen, with Holt and others, who advocated high fat feeding. But the evidence during the past five or six years has been in the other direction, and I think this idea has come to stay. Personally, I am convinced that whole milk can be given with just as good results as top milk; I see no advantage in separating your milk and taking skim milk and cream. It simply adds complications. Put it up to the average physician and mother, and they would rather feed whole milk than cream and skim milk. You can add fat to whole milk just as readily as to skim milk, and it answers the purpose better.

The idea of feeding so many ounces per pound of body weight is the simplest feeding rule I know of.

Now as to the question of proprietary foods versus cow's milk, there is no question but that the doctors are sometimes guilty of feeding too much proprietary food. It is easy for the mother, it is easy for the doctor; but it is not fair to the baby, and a little attention paid to the modification of cow's milk, such as has been illustrated in the paper and discussion, will pay a large return. I believe it is not so profound nor complicated but that the physicians can master it if they will give it a little careful attention.

There is a large group of these severe gastro-intestinal disturbances in which breast milk and breast milk alone will save the child, and I believe we often do not realize this until the baby slips away from us, when if we would face the facts and say that nothing will save this baby except mother's milk, they would go out into the neighborhood or countryside and find a wet nurse, if you make it emphatic enough. Often the baby can be saved in this way.

Dr. E. R. Sisson, Greenfield: I believe we should examine the stools to find out what is the trouble, whether too much fat, starch or sugar. I do not think we pay enough attention to the infant's stools. I think every time we have a child sick with intestinal trouble we should have the napkins saved so we can examine the stools and see what the bowels are doing. I believe the stools are absolutely the key to what is going on in the intestinal tract.

Dr. J. H. Taylor (closing): The preponderance of the discussion has been rather favorable to what was said in the paper, and because of the lateness of the hour, and because of the fact that if I got into the discussion I might keep you here until 9 o'clock, I will only say in closing that I wish to thank all the discussants as well as those who have remained to this hour.

THE DIAGNOSIS AND TREATMENT OF SIMPLE GLAUCOMA *

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Glaucoma simplex, or chronic non-inflammatory glaucoma, is a relatively common disease of middle or advanced life, and, as its name indicates, it is unattended with active inflammation. Like other forms of glaucoma, it is attended with increased intra-ocular tension, though that symptom may be overlooked unless the examination is critical and thorough. Its course is very insidious and its duration is years. If unchecked it terminates in blindness. Its early recognition and the adoption of appropriate treatment is therefore of supreme importance.

The fact that there is an absence of any marked external symptoms and no attacks of inflammation or pain, accounts for the frequency with which the disease escapes detection at the hands of the patient and not infrequently the physician as well. However, there are certain well-defined symptoms and manifestations which unerringly point out the nature of the disturbance.

The disease may exist for some years before it causes symptoms which lead the patient to consult a physician. There may or may not have been premonitory symptoms, such as attacks of foggy vision and halos around lights, which, with the diminished accommodation or premature presbyopia, cause the patient no concern as long as central vision remains generally good. The pupils are usually a trifle larger than one would expect them to be in middle or advanced life, though it is seldom that they do not respond readily to light and accommodation. To add to the deception the anterior chamber upon inspection may appear to be normal, and palpation gives a questionably negative result. Often the optician aids in delay in securing advice by advising the patient that all that is needed is a change of glasses. Later when central vision begins to fail the same optician may advise the patient that a cataract is forming and that blindness must intervene before the sight can be restored. In the meantime much valuable time is lost in securing appropriate attention.

Among the early symptoms noticed by the patient are transitory attacks of blurred vision, night blindness and the apparent necessity of changing glasses often. A hasty examination of such a patient with eyes appearing normal externally may be negative and result in no further attention than a prescription for a change of lenses. But a critical examination will detect the contracted field of vision, the faint cupping of the disk and with the tonometer the increased intra-ocular tension.

In this connection it is appropriate to say that the patient who consults an oculist to obtain a prescription for glasses is entitled to and should have a careful ophthalmoscopic examination irrespective of the state of the vision. If he gives a history of any suspicious symptoms, or there is the slightest evidence of cupping of the disk, both the tonometer and the perimeter should be used, irrespective of a presumably normal eye by palpation and inspection. As deSchweinitz has well said, palpation possesses only historic interest in comparison with the tonometer for estimating tension. A beginning simple glaucoma that otherwise might be overlooked will be detected by the increased tension as determined with the tonometer readings, and by the contracted fields of vision as determined with the perimeter, even though the cupping of the disk is questionable. Such a patient should be placed upon appropriate treatment at once in the hope of arresting the diseased process.

Concerning treatment, considerable difference of opinion exists. Lowering the intra-ocular tension is the desired result to be obtained, and some prominent clinicians resort to operation at once, while others pin their faith to medicinal measures and regulation of the habits of the patient. Of operations, there are several proposed, including iridectomy, anterior and posterior sclerotomy, cyclodialysis and trephining. For many years iridectomy was the operation of choice among those oculists who favor operation, though all admitted that an iridectomy was not so successful in simple glaucoma as in acute congestive glaucoma. Of late years the LaGrange operation, and still more recently the trephine operation of Elliot have come into favor, and the latter bids fair to supplant all other forms of operative treatment in any forms of glaucoma.

The success of the trephine operation depends almost entirely upon a reasonably faultless technic. It offers the advantage of being

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free from many of the dangers and complications which threaten when an iridectomy is performed. Experience with the operation seems to justify the use of a 2 mm. trephine, and the opening to be at least one-half in corneal tissue after dissecting downward a large and broad conjunctival flap and splitting the cornea according to the method recommended by Elliot. The scleral button should be clean cut and be removed in its entirety. A small but complete iridectomy through the trephine opening is justifiable in nearly all cases, and offers an element of safety which should not be ignored.

Medicinal treatment is confined to the use of the miotics, eserin or pilocarpin. Eserin is the more active and is preferred by Posey, who is the most ardent supporter of the miotic treatment of simple glaucoma. He uses the salicylate of eserin, beginning with a solution of 1/10 grain to the ounce, and gradually increasing the strength until, if the drug has continued to act favorably, at the end of three years the solution has a strength of 3 grains to the ounce. In the hands of deSchweinitz and many others pilocarpin hydrochlorate has proved equally as efficient and less irritating, though its strength should be twice that of the eserin solution. In my own cases, the majority of which have not been seen during the early stages of the disease, neither pilocarpin nor eserin in the strength solution recommended by either Posey or deSchweinitz have been sufficient to keep the pupil contracted, reduce the intra-ocular pressure or check the progressive contraction of the field of vision. Beginning with an eserin solution 1/4 grain to the ounce, or a pilocarpin solution twice that strength, the average case of simple glaucoma will respond to the treatment.

That miotic treatment does hold the disease in check for long periods of time cannot be doubted. The following case is an instance.

Mrs. T., aged 71, consulted me in 1910 because of inability to see anything except straight ahead. Had noticed foggy vision for a couple of years, but optician had advised her that the symptoms were due to change of refraction only. With the refractive error corrected vision was 20/15 in each eye. External appearance of the eyes normal, with the one exception that the pupils were a trifle larger than would be expected in a patient past middle age, though they reacted to both light and accommodation. By palpation the tension did not seem to be much increased, but the ophthalmoscopic examination disclosed marked glaucomatous cupping of both disks, and perimetric examination showed sharply contracted fields of vision in both eyes. Under pilocarpin alternated with eserin, both in gradually increasing strength, supplemented by general treatment and a careful régime the patient retained 20/15 central vision for a period of three years, or until her death.

In my own experience eserin in olive oil is less irritating than eserin in aqueous solution, though there are some patients who do not tolerate eserin at all and for whom pilocarpin must be prescribed. The strength of the solution must be such as required to keep the pupil contracted irrespective of any rule, and the success of the treatment will be shown by retention of the central sight and the existing field of vision.

In my judgment miotic treatment always should be the first treatment employed, and it should be continued as long as effective. When it ceases to be effective, as evidenced by the slowly contracting field of vision and diminution in the central sight, then it is time to consider operative measures. This may be early or late in the history of treatment.

Inasmuch as arteriosclerosis, with its increased blood pressure, chronic constipation, gouty and rheumatic diatheses are predisposing factors, it is incumbent upon the physician to recommend appropriate treatment and a proper regulation of the habits of life. The patient will do better with only moderate exercise and freedom from all nervous excitement. The diet should be plain but nutritious. Alcohol and tobacco should be interdicted. Frequent warm baths, mild diuretics, saline laxatives and appropriate treatment of the gouty or rheumatic diathesis are essential. Massage of the eyeball for fifteen or twenty minutes several times each day has a very favorable effect in lowering intra-ocular tension.

Among operations the trephine operation is to be preferred, and probably best results will be secured by closely following the technic laid down by Elliot. In my own cases I have used the 2 mm. trephine and performed a small but complete iridectomy through the trephine opening in every instance. The results so far have been highly satisfactory, and though sufficient time has not elapsed to show what the ultimate outcome will be, several cases have shown for months a relatively normal intra-ocular tension as determined with the tonometer, and reten-

tion of the sight and fields of vision possessed at the time of the operation.

In conclusion, a plea is made for more critical ophthalmoscopic examinations and more general employment of the tonometer and perimeter in those patients of middle or advanced life who come to us complaining of vague symptoms which are so often attributed to a need of change of glasses or to some slight systemic derangement. The preservation of the best vision for the longest period of time for the patient suffering from simple glaucoma necessitates discovery of the disease early in its progress and the adoption of appropriate remedial measures.

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DISCUSSION

Dr. D. W. Stevenson, Richmond: Glaucoma is one of the most trying diseases that an oculist has to treat. Dr. Bulson's paper is most excellent, and represents the best ideas on the subject to date. I know of no more melancholy patient that comes into an office than the patient with the usual type of simple glaucoma. These patients are pessimists, and after the doctor has seen them for four or five years he is very pessimistic himself in many cases. I remember one case in which I did an iridectomy in simple glaucoma. The patient was practically blind when I did the operation. What she complained of mostly were colors and flashes of light. Operation, in a sense, seemed to be a success, and yet she still complained of colors. I did another operation, a sclerotomy, and this was followed by more colors, and she still kept insisting almost every time I saw her that I try to relieve her condition. In desperation, because of her insistent demands that these lights must be gotten rid of, I finally enucleated the eye, and she still saw lights, and I believe when she gets to Heaven she will be still seeing lights.

A great many of these patients have peculiar mental symptoms, partly due to the eye trouble, but I think also associated with the general constitutional trouble. The point made by Dr. Bulson concerning the general care of the health I think was excellent. Of special importance is care in regard to the diet. A great many of these people live very sedentary lives, but eat heartily, and the reduction of the diet requires the skill of the best oculist. As Dr. Bulson said, these patients have gouty symptoms; they have arteriosclerosis; they have high blood tension, and the keeping of that down often has a great deal to do in relieving the eye symptoms as well as the mental symptoms.

I have done about eight trephine operations. It is not an operation that we have much opportunity of performing. I have had some excellent results with it, however, and look upon it as the most promising operation that we have. The prospect of giving these people comfort and relief is, I think, one of the great gains in ophthalmology in the last century, yet I believe at the same time that the general treatment mentioned by the essayist ought to be something that every oculist should carry forward as long as these people live. Indeed, now, when patients with simple glaucoma come to me, I tell them that I must treat them until they die; that they should report to me at least once every three months, because the general health must be looked after, and the hygiene of the whole life must be considered from every point of view. They suffer more than any other eye patients of whom I know. They often border on insanity just as the result of this disease, and I do not altogether believe that all the symptoms are due to the eyes.

Dr. L. D. Brose, Evansville: While the etiology of glaucoma simplex is still awaiting a solution, we do know its characteristics, and we may unite in saying it is a progressive affection not, as a rule, associated with inflammatory signs or subjective sensations other than headache, but sooner or later accompanied by a cupping of the optic nerve, reduced vision, defective visual field and disturbance of color and light sense. Since the introduction of the tonometer, which permits of more accurate estimation of intra-ocular tension than was formerly possible through palpation, it is pretty well established that there is during the existence of the disease increased tension, although said increase may occur irregularly and not remain a constant one. Notwithstanding the enumerated characteristics, the diagnosis of simple glaucoma is not always easy, and it may be mistaken for physiological disk excavation or for excavation connected with atrophy of the optic nerve. Augmented tension and glaucoma are by no means identical conditions, and it is rather a general experience to many of us to find the former temporarily, at least, during severe iritis, and yet the eye afterward remains free from glaucoma. At one time every excavation of the optic disk that reached its margin was forthwith set down as glaucomatous. When the character of the excavation is in doubt, especially when it occurs bilaterally, our diagnosis should not alone rest upon the disclosure of the ophthalmoscope. All other symptoms of glaucoma should be sought for, and it is to these that I would especially direct your attention. Progressive peripheral contraction of the nasal side of the visual field is highly

indicative of glaucoma when found with unilateral cupping of the disk, or with bilateral excavation extending to the periphery of the nerve, with overhanging edges and recession of the lamina cribrosa. Yet cases do occur with a paracentral scotoma. Persistence of the color sense, with the ordinary usual arrangement of green inside of the red and outside blue, is the rule in the glaucomatous field. However, a very similar cupping of the disk and arrangement of the color field may follow in some cases of simple atrophy, while, on the other hand, in a proportion of cases of glaucoma the relative contraction of the color field may suffer more than for form. Misty vision and the appearances of halos are not of frequent occurrence in glaucoma simplex, but when present are corroborative evidence of its existence. Intra-ocular arterial pulsation and discoloration of the choroid surrounding the optic disk, termed halo glaucomatosis, are likewise inconstantly found, but when seen serve to verify the diagnosis. The relationship between the size and shape of the pupil, and the presence or absence of optic-nerve excavation, and the state of intra-ocular tension in simple glaucoma is not a constant one. Since a correct diagnosis is of first importance in this disease, I must urge that each case be retained under observation and the symptom-complex studied and weighed, as a whole, for only in this way can we hope to avoid error in diagnosis and treatment. As to the latter, I shall not enter into lengthy detail. Suffice it to say that operative interference when done most skilfully is only too often an uncertain means to an end, and we must remain contented with having ameliorated some of the symptoms, while the disease *per se* is not cured. I know that Colonel Elliot considers his operation easier of performance than simple iridectomy, but some of us at least who have seen him operate and trephine can bear witness that it has required more time and delicate work than is the rule for simple iridectomy. I have personal knowledge of a patient who lost an eye through iridocyclitis following iridectomy made by a skillful Chicago ophthalmologist, while in another instance in a like operation made by a celebrated Vienna eye surgeon there occurred vitreous prolapse. Nor does enucleation of the blind eye always insure relief from the terrible head pains, as a case in my own practice bears witness.

In conclusion, I again would urge that you study not only the diseased eye, but likewise your patient's general condition, and since glaucoma oftenest is met with in those beyond the fourth decade, we should in particular look for auto-infection due to disease of the biliary tract, or may be in connection with chronic appendicular disease, or from displaced abdominal viscera. Examination of the urine, study of the blood pressure, and a consideration of the general condition of the blood-vessel system must not be omitted. By some it is thought that rheumatism bears a certain causal relation to glaucoma. For the eye itself we prescribe glasses to correct errors of refraction, enjoin prolonged use of the eyes for near work, and instill two or three times daily a collyrium of eserin or pilocarpin. Should the progress of the disease remain unabated, we may then think of operative interference.

Dr. F. C. Heath, Indianapolis: I was very much interested in reading recently the report of Dr. Lobow, a South American oculist, upon the effect of heat in causing glaucoma and cataract. Glaucoma and cataract are both much more common in hot countries than elsewhere. That may be one of the reasons why two British army surgeons have become so famous in the line of ophthalmology — Smith for his cataract operations, and Elliot for his glaucoma operations, both in India, a hot country.

Dr. Bulson in his paper speaks of the value of the tonometer. We know that it is very easy, with our fingers, in the old method of taking the tension of the eye, to determine when the tension is markedly plus in an acute case, for example. It has been difficult to tell, and we are often in doubt, in cases of simple glaucoma, as to whether the tension is increased or not. In many of those cases the tonometer solves the difficulty completely.

Another thing: The doctor spoke of the regulation of the habits of the patient, which is a very important point. In connection with that, I believe it is an advantage to look after the elimination in these cases, and I have attached some value to the use of the salicylates. In a great many cases I have seen advantage from the use of myotics. I recall one case — one of Dr. Thompson's cases — of a man with simple glaucoma. I happened to be treating his sister at the time for an acute glaucoma, and he came into my office and told me that he had chronic glaucoma. He said that Dr. Thompson prescribed eserin for him, and that he carried it around with him. He had learned to tell the tension of his own eyeball, and when too high he used the eserin himself. That man had been taught by that method to keep the tension down and preserve vision in his eye. Of course, we run across some cases that do not yield so readily.

As regards operative treatment, while iridectomy has served us well in acute glaucoma, we have been disappointed with its effects in chronic glaucoma. While I have not yet done the operation of trephining, I have kept just about ready to do it in several cases, but they

have either gotten along pretty well with the use of myotics or passed from under my observation, and so I have not done it. I have a case scheduled for next Saturday, unless the patient backs down, but I have been led by what I have read in the literature and learned by conversation with oculists to think that trephining is the operation to be done, and I am glad at this time that I can agree more fully with the essayist than I did in his paper on muscles of the eye two years ago.

Dr. W. A. Hollis, Hartford City: In my opinion there has been a very important point omitted in Dr. Bulson's very thorough and complete paper, and whether it is intentionally omitted or merely overlooked I would like to know for my own information. It has also been overlooked by those who have discussed the paper, and that is the subconjunctival use of sodium citrate in 5 per cent. solution, as advocated by Dr. Fisher of Cincinnati, the results of his physiological experimentation with the different saline preparations upon the eye. I will say that I have used it in connection with myotics and its effect has been very gratifying, the tension subsiding somewhat in a very short while—in a half hour—and the patient feeling much better. I would like to know for my own benefit what Dr. Bulson's experience has been with it, at least what his opinion of it is.

Dr. T. C. Hood, Indianapolis: I want to say a word in regard to the attitude of the English ophthalmologists, as I have found it, toward this Elliot operation. I think with Bulson that it is a good operation; it is a simpler operation than iridectomy and easier performed. I liked it when I read about it and I still like it after I have done it, but the English ophthalmologists have taken it up very conservatively and do not like it very much. Some of them like it, but the majority of them will say to you when you ask them about it, "Well, I don't know; this little hole, if it stays there, will produce, or has produced in the cases I have operated on, a subnormal tension, which is probably just as bad as too much tension, and will probably conduce to diseased conditions of the choroid and detachments of the retina, or hemorrhage into the posterior chamber, the vitreous chamber of the eye, and the patient may have some trouble." Others will say that their principal objection to it is that there is a late infection through the conjunctival covering which is very thin over this little hole. That is a valid objection, because there have been some cases that have terminated in that way. An infection gets in there and produces an iridocyclitis or an ophthalmitis and loss of the eye. Those are the things that they talk about over there in regard to the Elliot operation, and yet my experience with it has been very happy indeed. I have had very few cases — two, I think — and the last one was operated on in March of this year, which has not been long enough yet to draw definite conclusions, but the field of vision has improved and central vision is better; the tension is normal, perhaps a little subnormal. I really am derelict because I have not taken the tension with the tonometer since the operation. I know it is at least normal or subnormal. It should be taken after as well as before operation, but I have not done it, but I know that the eye is doing well and the patient is relieved and that the other eye will be operated on. It is not so bad, but the subject of a simple chronic glaucoma and will be operated on perhaps within a month, if the patient consents.

Dr. Bulson (closing the discussion): Concerning the use of sodium citrate, I look upon every case of simple glaucoma as eventually an operative case. For that reason I am opposed to the subconjunctival injections of anything that possibly may produce adhesions. Aside from that, I notice that nearly all who have reported good results from the subconjunctival injection of sodium citrate employed a myotic. I get the same results with the myotic without using sodium citrate, and, as I say, looking upon the case as being a possible operative one, I do not want to have the interference with my large conjunctival flap, necessary in the trephine operation, by the adhesions which are very apt to come from any subconjunctival injection. Generally speaking, I think that the subconjunctival treatment is more or less discredited by practically all of the leading clinicians to-day.

As to the observation of patients, I cannot agree with the statement of Dr. Stevenson that the patient should be seen not oftener than once in three months. I think they need closer observation. They should keep in touch with an ophthalmologist, and have him advise as to the strength of solution to be used. The ophthalmologist should keep the patients stimulated in their efforts to follow the régime that should be followed. They very soon get lax when they have no trouble. The ophthalmologist should also note what is occurring in the field of vision.

Concerning the advance of the disease, I think there are several things that should be noted, as pointed out by Dr. Brose, but one of the things I am most interested in is the field of vision, along with the cupping of the disk. I am also interested in the high intra-ocular tension. It is quite true that the tension does fluctuate and occasionally you will see a patient with a normal eye with increased ocular tension, but the increased tension does not persist. It does persist in a simple glaucoma, and that is the cardinal point. If the tonometer readings

show a pressure anywhere from 35 to 60, and they continue that way, that patient has a glaucoma, and should be treated accordingly. It is a good deal like blood pressure. We have simple hypertension. A patient may have a blood pressure from 180 to 220, and if it does not stay there it does not mean much, but if you have a patient with a persistent blood pressure of 180 to 200 or more then that patient probably has an interstitial nephritis.

Concerning the trephine operation and the objections that have been raised, I would say that the operation has been tested repeatedly and found very efficient. We must not lose sight of the fact that the patient has a disease that is going to end in blindness. We know that there are certain risks attending the trephine operation, but the risks are not one-tenth those attending iridectomy, and if you are not holding the vision with eserin, why bring up a few minor objections regarding the trephine operation? It is not a difficult operation to perform. I had the pleasure of talking with Colonel Elliot concerning the results, and he told me that he had done over one thousand operations, a very large percentage of which had been with the most gratifying results. Nearly every man who has made objections to the Elliot operation has not followed the Elliot technic exactly, but has attempted to better it. They have no right to criticize Elliot when they have done only a few operations as compared with the thousands done by Elliot. You may say that the patients in India are different from ours. I agree that as a general thing they are worse. Many of Elliot's patients returned after months or years and he had an opportunity to reexamine them. In this country a great many trephine operations have been done—more since Elliot's visit. The majority of the operators are quite satisfied with the operation and its results. The general consensus of opinion, I think, is that the trephine opening, as advocated by Elliot, is too large, and yet the two-millimeter opening is the one I have used until recently, when I cut it down to one and a half and I am not so sure that my results were not better with the larger opening. It is quite true that the two millimeter opening will close in to a certain extent by the formation of new tissue, and it is not so large afterward. If it remained large you might have a subnormal tension, but I have not been troubled with that result. I think the secret of success in most of these cases is in dissecting the conjunctival flap very much as Elliot does, and then making the opening partly in corneal tissue, partly in scleral tissue, after the cornea has been split, as he terms it. I think much of the success depends entirely on that point.

The gist of the paper, however, has been overlooked. I made a plea for an earlier recognition of these cases. I do not believe there is a man here to-day who does not see cases of simple glaucoma that have been overlooked, sometimes by good men, because of the careless method of thinking, as the patient often does, that all that is needed is a change of glasses. I know some very good ophthalmologists who make a very perfunctory or no examination of the fundus in some of their refraction cases. I think it is a very serious blunder. I believe that the fundus should be examined in all refraction cases, and if there exists the slightest suspicion of cupping of the disk or increased tension the tonometer should be used and the field of vision taken.

So much has been said concerning climate for the treatment of tuberculosis that it would seem superfluous to add anything to what has already been said, yet we cannot refrain from calling the attention of our readers to the fact that but a limited number of persons who are suffering from tuberculosis can seek the radical change of climate found in the far West, nor is it necessary for such patients to make the change in order to secure results. Tuberculosis is cured in Indiana just as well as it is cured anywhere else providing the same methods are employed. In testimony of this it is only necessary to take into consideration the many excellent results that have been secured by those physicians who have employed climatic conditions in the central states in connection with other recognized measures of value in the treatment of tuberculosis. It is conceded that the physician who makes a specialty of lung diseases will be most successful, and in order to have proper control of his patients he must place his patients in a hospital, sanitarium, or camp where he will have absolute control of the patient. There are a number of private sanitariums throughout the middle West where tuberculosis cases are managed with remarkable success, and these institutions should receive consideration before we decide to send our tuberculous patients long distances from home in order to secure a climate that oftentimes does not act as favorably on our patients as the climate at home. In any given case of tuberculosis the earlier the diagnosis is made and appropriate treatment instituted the better will be the results. There is, however, no reason why tuberculosis cannot be cured in the climate of the central states just as well as it can be cured anywhere else providing the same regime is followed.

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EDITORIALS

ON TO SAN FRANCISCO

The annual session of the American Medical Association is always an event of interest to a large number of medical men, and this year's session is unusually so, in view of the fact that it is to be held in San Francisco during the period that the great Panama-Pacific Exposition is open.

Heretofore innumerable members of the Association have sacrificed the annual session in treating themselves to a European trip for pleasure as well as scientific profit, but with the existing war cutting off European travel, there should be a corresponding increase in this year's attendance at the annual session of the Association, and this is augmented by the unusual attractions offered by San Francisco. A visit to the Panama-Pacific Exposition is in itself a treat which appeals to the progressive physician, but aside from all this the scenic advantages offered by numerous routes to and from the Pacific Coast are sufficiently enticing to tempt even the most radical "stay-at-home."

"See America first" is a slogan adopted by the great transportation companies of this country, and is an admonition well worthy of following, for nowhere in the world can there be found better or more diversified scenery than in America. It is a sad reflection on our education, sense of appreciation and loyalty to home for us to travel over Europe and rave over the Swiss Alps, the Italian lakes and other famous scenic places abroad before we have seen and appreciated the wonderful and even world-famous scenery of our own country. To ignore the rugged scenery of the Rockies, the awe-inspiring chasm of the Grand Canyon, the colossal trees, picturesque water falls and other charms of the Yosemite and other places in California, the largest glacier systems of the world found in the Glacier National Park, and to visit that museum of Nature freaks, eccentricities and scenic beauty found in the Yellowstone Park, is to stamp us with the badge of ignorance and non-appreciation of those advantages afforded by Nature to broaden our intellects and add to our pleasure and profit.

The great Panama-Pacific Exposition, costing $50,000,000, is in itself a stupendous work in commemoration of the completion of the Panama Canal, and is recognized as the greatest world show in history. With all of these inducements to tempt the physician to visit the Pacific Coast this year it will be strange indeed if the annual session of the American Medical Association does not show an attendance that far surpasses the attendance at any other session held in the Far West.

In considering how the intending visitor is to go and come from San Francisco, the wise doctor instinctively will think of the arrangements that have been made to induce physicians to travel by special trains and in special parties, not alone for the purpose of economizing in expense, but with a view to affording companionship of congenial spirits and accomplishing the most within a limited time. Of unusual interest to Indiana doctors are the perfected plans for the "Hoosier Special," which has been arranged for and has the approval and patronage of numerous prominent members of our Association. As stated in the announcement, the itinerary is most attractive, including, beside the scenic wonders of Colorado, the unique attractions of Utah and the charms of California, a sea voyage from San Francisco to Portland, with the climax in Glacier National Park. As an added feature, the "Hoosier Special" patrons will be tendered a special clinic by the Mayos, at Rochester, on the return trip. The train leaves Chicago over the Burlington at 10 a. m., Thursday, June 10. Seven hours and a half will be spent at Denver, four hours at Colorado Springs and two hours at Glenwood Springs. The scenic route over the Denver & Rio Grande ends at Salt Lake City, where the entire day is spent. The next stop is at Los Angeles, where a full day is spent before going on to San Diego where a full day is devoted to seeing the exposition at that place. Returning to Los Angeles, another day is given for sightseeing. Two hours are devoted to Santa Barbara, and nearly a whole day to Del Monte, and San Francisco is reached the evening of Sunday, June 20. From that time until the following

Saturday morning the time will be devoted to the session of the A. M. A. and attendance at the Panama-Pacific Exposition. The trip to Portland will be made by steamer and should prove to be one of the most enjoyable features of the entire tour. Short stops are made at Seattle, and three days are given over to the Glacier National Park. One day is reserved for St. Paul, and another day for the Mayo clinics at Rochester—the tour being completed on arrival at Chicago Tuesday morning, July 6. The time consumed in the tour is twenty-six days, and it is announced that the cost will be $250, which includes all necessary expenses.

Those who do not care to take such an extended trip or who prefer to go alone after reaching San Francisco, will be interested in several other special trains that have been arranged for the benefit of medical men who are to attend the San Francisco session of the A. M. A. These trains go over different routes. The American Medical Scenic Route Special will go over the C. B. & Q. Railroad from Chicago to Denver, and the Denver & Rio Grande from Denver to San Francisco. The train will be made up of modern equipment and will be personally conducted. It will leave Chicago Tuesday morning, June 15. One-half day will be spent in Denver, a whole day in Colorado Springs, one-half day in Salt Lake City, and the party will arrive in San Francisco Sunday evening, June 20. Arrangements have been made for carriage drives in Denver, the usual side trips from Colorado Springs—including a trip to Pike's Peak, drives through the various canyons, Cave of the Winds, the scenic short line to Cripple Creek and many other trips of scenic nature. At Glenwood Springs the party will have an opportunity of taking a swim in the Open-Air Hot Swimming Pool, and at Salt Lake City the travelers will have ample opportunity of visiting the Mormon tabernacles and the Great Salt Lake. The entire trip—through the mountains, the Royal Gorge, across the Continental Divide, through Glenwood Springs, past Grand Junction and through the Feather River Canyon—is made in daylight, and the party will arrive in San Francisco in the early evening. The fare to San Francisco on this special train and return by any of the direct routes is $62.50 from Chicago. The trip to Los Angeles and San Diego and all other side trips are extra, and an extra charge is made for returning by Portland, Seattle or any of the northern routes. Pullman fares also are extra.

The American Medical Grand Canyon Route Special is scheduled to leave Chicago, Sunday, June 13, by the Santa Fe Railway, and to permit visits to the Grand Canyon and the San Diego Exposition en route. The entire day of June 16 will be spent at Grand Canyon, Arizona, and the day of June 18 at San Diego, arriving in San Francisco Monday morning, June 21, at 9:40. The additional fare of $7.50 is charged for the Grand Canyon side trip. Pullman rates for lower berth are $5 more than the rate for direct routes without stopover.

Excellent train service has been provided for all of these specials, and each route has its particular advantages. Those who contemplate the trip should get in touch with the agents who are representing the various specials. Dr. Ralph Chappell, Traction Building, Indianapolis, is looking after the arrangements for the "Hoosier Special." For particulars concerning the Grand Canyon Route Special, write F. T. Hendry, General Agent, Santa Fe Railway Co., 151 Griswold Avenue, Detroit, Mich., and for particulars concerning the Direct Scenic Route Special, write P. S. Eustis, Passenger Traffic Manager, Burlington Railroad Company, Burlington Building, Chicago.

Finally, The Journal office will give Indiana men every possible assistance in perfecting their arrangements for attending the San Francisco session of the A. M. A., and either will give all needed information or put correspondents in touch with those who can do so.

In view of the possibility of being disappointed in getting the best of train reservations and hotel accommodations, we suggest that those who intend going to San Francisco should make complete arrangements at the earliest possible date. There never has been quite as much inducement to physicians to visit the Pacific Coast as there is this year, and in all probability we never again shall have the opportunity of combining so much in a single trip.

COOPERATION IN MEDICAL PRACTICE

A most interesting phase of contemporary medical progress is the drift toward cooperation in the practice of the specialties. Cooperation as a fundamental principle of production has so well established itself that it has become one of the axioms of rational progress.

In economic industries cooperation has fought its battles and won them, and every one is a

beneficiary of this victory. It is to be noted in passing that the ultimate justification of industrial cooperation is to be found in the widespread benefits which it has conferred on society. Educational and to a less extent religious institutions are yielding to this demand for greater efficiency, and are applying the principles of cooperation to their problems of growth and development. Witness the cross-roads schoolhouses abandoned in large numbers, their former pupils now transported to the better equipped township school. This axiom of efficiency—cooperation—is fundamental in a complex social organization, and in its essence aims at attaining the highest standards of quality in production, delivered to the consumer at the smallest cost. This holds true whether the product be an automobile, a gallon of gasoline, an education or a finished diagnosis or therapy. The so-called specialties in medicine are a necessity, and their growth and development has been a natural corollary to medical progress. The output of scientific research has been too voluminous and complex to be handled by the general practitioner, hence the necessity of men devoting themselves to a narrow field. No single individual can master the technic of diagnostic and therapeutic detail which medical research offers to the sick and to which the sick are abundantly entitled.

What has been the result of a failure to cooperate in the practice of the specialties? Outside of extremely narrow and discredited circles no one denies the great services rendered society by the science of medicine, and yet all are constantly brought face to face with the lack of confidence by the public in the every-day application of the fruits of scientific medicine to the needs of the sick. A paradox confronts the lay observer. Here is a profession which in net output of useful knowledge leads all others and is universally recognized and appreciated, while the individual members of that profession in their daily service to the community have not made a corresponding advance or even have lost in their hold on the confidence of the public. The explanation of this situation is as follows: The advances in medicine, as far as the healing of the sick is concerned, have been made in the discovery and application of refined methods of diagnosis and in special and expert therapy. These fields are occupied by specialists and it follows that most of the benefits derived from the improvements and advancement in medicine must get to the sick by way of the specialist. These men are handling the major part of the output of the fruits of research produced in the last twenty-five years. This is at least the theory of specialism, and that it is actually true is indicated by the fact that the growth of specialism has been coincident with the development of refined methods of diagnosis and the great impetus of recent years in various lines of special therapy. It is at this point that the weakness of specialism from the standpoint of the welfare of the community becomes manifest. There is no cooperation in the work of the specialties. Each thinks, acts and works alone, dealing out in expensive fragments what the patient wishes to be complete—that is, a finished diagnosis or a finished therapy. Such a system is cumbersome, inadequate and enormously expensive. It precludes the possibility of applying the products of scientific research to the needs of the sick except at a tremendous loss. Specialism as at present conducted is therefore an economic failure from the standpoint of the welfare of the sick because it distributes to them a minimum amount of service at a maximum cost, and until such time that the economic distribution keeps up with production may we expect to see a dissatisfied and waning public following.

The solution of the difficulty does not seem to entail insurmountable obstacles. It can be accomplished by any group of men representing closely allied specialties, who are individually suited for organization. What is needed is a close, sympathetic, intelligent working organization whose aim is the correlation and economic application of all available scientific knowledge to the needs of the patient. The wonderful success of the great private clinics of this country are not the result alone of the professional superiority of their leaders, but to the superlative genius for organization which these leaders possess, whereby they have grasped the economic principles underlying the efficient distribution of medical commodities to a public eager to buy the best article at the lowest cost. The specialties as at present conducted are directly responsible for the chaos of diagnostic and therapeutic endeavor which prevails to-day. This chaos, so detrimental to the best interests of the sick, cannot be eliminated by raising the standard of professional accomplishment among specialists, but only by proper cooperation. Cooperation is as much an axiom of efficiency in medicine as it is in industry.

PRESENT-DAY METHODS OF ATTACKING SYPHILIS OF THE NERVOUS SYSTEM

Although the manifestations of luetic disease of the central nervous system are manifold, the etiologic agent is always the same. Whether the symptoms and signs are such as to warrant a clinical diagnosis of tabes, taboparesis, paresis, cerebral or cerebrospinal lues, the underlying pathologic change is brought about by the same germ that causes syphilitic changes in any other tissue or organ. Specific treatment—no matter how vigorously carried out—often has failed completely in these various forms of nervous system syphilis. The choroid plexus evidently holds back from the circulation within the spinal canal the curative drugs that are introduced into the general circulation. The barrier offered by this plexus is not absolute, however, for under the proper conditions some of the drug, namely, salvarsan, can be forced through this barrier and made to enter the cerebrospinal fluid. The newer methods of attacking brain and cord syphilis that have been developed recently aim to overcome this barrier effect entirely. The procedure in these methods is the introduction of the active therapeutic material directly into the cerebrospinal fluid by intraspinous injection.

Up to the present time the following substances have been used: (1) salvarsanized serum, (2) minimal doses of neosalvarsan, and (3) mercurialized serum.

1. Salvarsanized serum, introduced by Swift and Ellis, already has become quite popular. Various modifications of the original technic have been proposed, but the essential steps are as follows: (*a*) The blood is salvarsanized by intravenous injections of salvarsan or neosalvarsan; (*b*) after a suitable period some blood is withdrawn and the serum allowed to separate out; (*c*) this serum is inactivated, and (*d*) a definite quantity is injected intraspinously. The reactions reported following these injections vary greatly, depending probably on the nature and extent of the syphilitic process and the individual susceptibility.

2. A method of injecting neosalvarsan in solution directly into the spinal canal has been worked out by Ravaut and used with some modification by Wile, Warfield and others apparently with some success. The material injected consists of 1 to 12 mg. of the drug in dilute solution in either freshly distilled water, saline, blood serum or spinal fluid. The marked irritant action of even such minimal doses of the drug on the nervous tissues, leading so frequently to disagreeable, dangerous and occasionally even to fatal results, is certain to prevent this method from being used very much.

3. Mercurialized serum, introduced by Byrnes, is the most recent of the remedies suggested for intraspinous use. Blood serum containing 1/50 and 1/25 grain of mercuric chlorid in each dose is injected directly into the spinal canal. Like all other therapeutic sera in use at present, this serum can now be obtained prepared in sealed sterile vials. The reactions reported after its use are usually mild.

A great advance thus has been made in the therapeutics of cerebrospinal syphilis. That direct intraspinous treatment of these diseases is the method of choice must be recognized. Clinical judgment ought to decide just what should be the method of procedure in each case. There certainly ought to be more individualization in planning these treatments than in any other form of therapy. The general physical condition of the patient, the reaction of the blood Wassermann and the condition of the spinal fluid constitute the available data on which the clinical judgment is based.

A note of warning against the indiscriminate use of specific intraspinous treatment by those not sufficiently prepared or equipped to do it properly must be emphasized. It should be borne in mind that the content of the craniospinal cavity is such a delicate structure that it will not tolerate any degree of abuse with impunity The craniospinal cavity must be respected more than any other in the body. "Safety first" in this connection cannot be insisted on too vigorously. Great care must be taken in regard to every detail in carrying out an intraspinous treatment. Judgment and skill are just as essential as in any operative procedure on the brain or cord. In the present state of development of this new therapy its use ought to be limited to those who are familiar with all the various phases of this subject and who can be relied on to carry out a faultless technic. Perhaps in the further development of the subject a really ideal method of treatment may be evolved in which the technic may be such that it could be used with absolute safety by every practitioner who may be called on to treat syphilitic disease of the central nervous system.

THE FIGHT AGAINST FAKE MEDICAL ADVERTISING

The proprietary medicine manufacturers have grown fat, sleek and saucy during years past, but from this time forth they are going to travel a rough and rugged path and eventually fall by the wayside. *The Journal of the American Medical Association* has waged unrelentless warfare against these vultures and is directly responsible for the cooperation now given by some of the leading lay publishers, among which may be named *Harper's Weekly, Collier's,* the *Ladies' Home Journal, Saturday Evening Post* and *Puck.* Not a few of the large metropolitan daily newspapers also have joined the movement, and, while but few have carried on an editorial campaign such as that inaugurated by the Chicago *Tribune,* yet a great many refuse to accept medical advertising. Even the religious periodicals, which have been last to join the ranks, appreciate the necessity of refusing medical advertising. Now the work is augmented by the decision of one of the large mail-order houses (Sears, Roebuck & Co.) to leave "patent medicines" out of their latest catalogue. The decision has been accompanied by a statement from the firm which is concise but very comprehensive, and is a telling blow against the proprietary medicine interests. Among other things, they say:

"We find that valueless and even dangerous medicines are offered to the public through the medium of advertising that is extravagant, misleading, and deceptive—advertising calculated to deceive the well into belief that they are sick and to induce the sick to pin their faith to ineffectual means for recovery."

The New York City Board of Health is fighting the proprietary medicine interests by means of moving pictures. Some of the moving-picture houses in New York City are using between the moving films a slide reading as follows:

"Advice from the Department of Health, City of New York.—Don't make the 'patent-medicine' faker rich. His claims are always cunning lies. When you feel sick go to your family doctor. He is your best friend."

Without advertising the "patent-medicine" business could not live, and it is only a question of time when the smaller newspapers and weeklies will be forced by public opinion to throw out medical advertising of every description. When that time comes we shall hear no more of Lydia Pinkham's poor grade but high-priced cocktails, and Hostetter's Bitters, which make the ordinary "high ball" tame as an intoxicating beverage.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association.* Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

A Definition.—Christian Science is that form of religious belief that enables one to be positive he hasn't anything the matter with him if he hasn't.—*Puck.*

One meeting of every county medical society in Indiana should be devoted to a consideration of the subject of cancer. Let every county medical society secretary get busy at once and arrange the program. If you have no talent in your own county, then get talent from some other county.

"Fritzie" Feick, the notorious DeKalb County would-be statesman, who wielded the harpoon so vigorously during the last session of the state legislature, has resigned his office as legislator to accept a salaried position as deputy oil inspector. He deserves to be made president of the knockers' club.

Under a new ruling covering the provisions of the Harrison antinarcotic law, specialists and other physicians who use stock solutions of cocain in office practice are required to keep a record of the date when a stock solution is made, the date when such solution is exhausted and a record of the quantity of drugs it contains. He is not required to keep a record of each patient on whom these solutions are used.

Have you noted how our state Journal has improved in the past year? Recently we had an opportunity to see the journals of many state associations, and we are glad to state that Bulson's "Uplift Magazine" is at the top of the heap. We would suggest that in writing advertisers that you state that you saw their advertising in The Journal. If every member of the State Association would do this, our journal could be increased 50 per cent. in efficiency.—*Bulletin Lake County Medical Society.*

It does not seem necessary to warn the average medical man to refrain from giving testimonials to "patent-medicine" concerns, but in view of the effort on the part of the Chattanooga Medicine Company to secure endorsements for their product, Wine of Cardui, which just now is in the limelight because of their suit against

The Journal of the American Medical Association, and for fear that some misguided doctor may be led astray, we desire to issue a warning. No doctor should contribute aid of any character to perpetuate the sale and use of any secret concoction which has been advertised to the world as being capable of doing what every sensible man knows it cannot do. In fact, the doctor who is even half wise will be very chary of giving endorsements of any kind whatsoever, for endorsements have a rather surprising tendency to come back and taunt the giver.

The exploiters of the "twilight sleep" have been claiming loudly that the bad results reported from various quarters were due to failure to follow accurately the Freiburg method. The following, taken from the *Journal of the Michigan State Medical Society,* is a sample of the attitude of several conservative hospitals and lying-in institutions:

> The Michael Reese Hospital, Chicago, Ill., after a series of forty tests, has announced that they will apply "twilight sleep" only with the written consent of the mother, in which she absolves the hospital from any responsibility of injury to either herself or child.
>
> The reason given for this precautionary measure is that the Michael Reese staff has already tried "twilight sleep" exactly in accord with the Freiburg method in over forty cases and is not impressed with its desirability.

In this number of The Journal we publish a letter from the Commission on Cancer of the Medical Society of the State of Pennsylvania. The suggestion has been made that all county medical societies in the Union devote one of their June meetings to a consideration of the subject of cancer. This is to be followed by special numbers dealing with the cancer question by the leading medical periodicals of the country—this special number to be published during July. Such a campaign should go a long way toward educating the laity and improving the attitude of the medical profession concerning the necessity of early diagnosis and prompt treatment of cancer in order to prevent needless death from that cause. We especially urge the county medical societies in Indiana to follow the suggestion that has been made, and, with a view of giving our support to the campaign that has been inaugurated, we will devote our July number to the consideration of the subject.

Much has been done for the relief of the starving Belgians, and generous America is responsible for the shipping of vast quantities of food and clothing to the stricken country, but there is an urgent demand for the continuation of that spirit of liberality which in a measure has saved Belgium a worse tragedy than if the American people had not gone to her relief. Seven million people, of which five million are women and children, are still suffering for the want of the bare necessities of life. If the population can be preserved it can be made self-supporting in the near future, but for the present there is an urgent demand for bread to save a starving nation until it can secure returns from its own labor. Among those who are suffering are many deserving physicians, and to aid our unfortunate brethren in Belgium a committee has been formed to accept donations. This committee already has received over $5,000 in money, which has been used in purchasing food which is transported to Belgium without cost. The committee solicits further contributions and requests every physician to contribute as generously as means will permit. Contributions may be sent to Dr. F. F. Simpson, treasurer, 7048 Jenkins Arcade Building, Pittsburgh, Pa.

Crooked transactions and fakery do not bear the light of investigation. The proprietary medicine interests, now fighting for their lives, are displaying poor business acumen in retaliating with damage suits against newspapers and even individuals interested in baring the truth. Mr. Patten, now notorious through his connection with Wine of Cardui, and once a high official in the councils of the Methodist Episcopal Church, probably will wish that he had kept out of legal controversies when he discovers the torture that is in store for him when his career is given the searching investigation and publicity that will be brought about through his attempt to secure damages from *Harper's Weekly,* the president of the Louisiana State Board of Health and *The Journal of the American Medical Association.* The trouble with Patten and the rest of his ilk is that they consider that an abundance of money and high church positions are sufficient to ward off any attempt to expose their nefarious practices. They forget that there is a day of reckoning, and that it is approaching rapidly for the leaders in the proprietary medicine fraud.

It is not an uncommon thing for some medical men to prepare an article for presentation before several medical societies. We see no objection to the practice of making one good article do service before several different medical societies, but we strenuously object to any

attempt to gain further publicity for the author by asking several medical journals to print the same article. Among editors a request of this kind is the height of impropriety, and for a writer to permit his article to appear in several journals without the knowledge of the editors that the article has not been submitted for exclusive publication is sufficient to bar that writer from all reputable journals in the country when the fact becomes known. We mention this matter because several attempts have been made to impose on our good nature by submitting articles for publication that have been published previously or are to be published in other journals. In this connection we desire to announce that original papers are accepted for publication with the distinct understanding that they are contributed solely to this journal. Even papers that are presented before the Indiana State Medical Association, if published prior to presentation before the Association, will not be published in The Journal unless publication is accompanied by a statement giving the facts. We desire to remind our readers that the Association is worthy of something more than repetition of what has been presented elsewhere, and as anything presented before the Association becomes the property of the Association the matter should be original, and as original will find a place in The Journal. No objection is made to the reprinting of any article that appears in The Journal if due credit is given.

In *The Journal of the American Medical Association* attention has been called repeatedly to the way in which the medical profession has been used by the exploiters of proprietary medicine for the purpose of introducing their wares to the public. "In the past, one of the cheapest methods of putting a 'patent medicine' on the market," says *The Journal,* "has been to call the stuff an 'ethical proprietary,' advertise it exclusively in medical journals (whose advertising rates are much less than those of newspapers), freely sample the medical profession, put up the product in packages that are plainly intended to give the public all the information that may be necessary, and let time do the rest. And time has done it. When physicians have awakened to the fact that they have once more been used as tools, and the preparation is very plainly nothing but a nostrum, then the shrewd manufacturer turns his back on the medical profession and goes over openly to the place he belongs—the public press. The Advertising Association of Chicago, in its weekly bulletin for Jan. 4, 1915, prints a letter that has been received by an American advertising man from a German firm that wanted to place a medicinal product on the American market. One paragraph in the letter bears on the matter under discussion. Here it is:

> "'We beg to mention that the preparations are to be puffed in the first rank and principally so that the physicians (doctors) get acquainted with the same, and it is not necessary to puff them *for the present* in other classes of the public.'

"We have italicized the three words that have a special significance. Put more crudely, the proprietors of this preparation say: Advertise it at first exclusively to physicians and after they have brought it widely to the attention of the public, then it will be time enough for us to advertise it direct to the public. How long is the medical profession going to retain its unenviable distinction of being a huge advertising agency for the nostrum exploiter?"

As one of our friends expressed it, that was "some banquet" tendered to Dr. J. N. Hurty, State Health Commissioner, on March 12. Many prominent men honored Dr. Hurty by their presence, and among them were Governor Ralston, who presided as toastmaster; Vice President Marshall; Senator Kern; Dr. Stone, President of Purdue University; Dr. Bryan, President of Indiana University; Dr. Vaughan, President of the American Medical Association and Dean of the Medical Department of the University of Michigan; Dr. Evans, former Health Commissioner of Chicago; Dr. Craig, Secretary of the American Medical Association; Miss Newsom, President of the Indiana State Federation of Clubs, and Dr. McCoy, former President of the Indiana State Board of Health. All of these guests made speeches, and Dr. Heath of Indianapolis read an original poem dedicated to Dr. Hurty. In addition to this, a number of character sketches were introduced showing the work that has been accomplished through Dr. Hurty's efforts in the past nineteen years.

The event was a notable tribute to a man who stands foremost among the ranks of men of achievement. There is a saying that we pour execrations on great men during their lives and favor them with glowing epitaphs when they are dead. Dr. Hurty may have suffered from execrations, but it is fortunate that while he still lives he is reminded by this wonderful tes-

timonial banquet that his great work has been appreciated. May he live to give the State of Indiana twenty years more of the kind of service he has given for the uplift of all the people! He is the most original, energetic and efficient health officer that the country has ever produced, and Indiana should be proud to claim him as her own.

Some months ago The Journal published an item to the effect that Dr. Louis Weinberg of Ligonier was charged with having taken one of his young lady patients to Chicago for immoral purposes. The information came through a Chicago newspaper, which referred to the matter as being under investigation by federal authorities. Publication of the item in The Journal brought a letter from Dr. Weinberg denying the charge and demanding an editorial retraction, with accompanying statement as to the origin of the report. About the same time a minister called at the office of The Journal and attempted to secure the promise of the editor that a corrected statement and something favorable to the accused physician would be published. On close questioning, the minister admitted that the federal government had filed charges and that the accused physician had been directed to appear before a federal court for trial. Accordingly the editor saw no reason for publishing any retraction or explanation, and permitted the matter to drop with the item of news that had been given publicity. As a sequel we read in the daily papers of March 31 that Dr. Weinberg has been found guilty by jury in the federal court of Chicago of having violated the Mann white slave act. Perhaps the doctor is the victim of a "frame up," but the evidence does not make it appear so to a jury.

For several years efforts have been put forth to promote international peace, and the Carnegie Endowment was established to assist in that purpose. The great Peace Palace erected at The Hague was supposed to be a forerunner of a state of mind on the part of nations that would result in a speedy disarmament; yet while the leading nations of the world were sending envoys to peace congresses, those same nations were bending every energy to perfect their armies and navies, and the present tremendous war raging in Europe is mute testimony of the fact that no lasting peace can be expected as long as nations continue to appropriate millions for defense. The efforts of the Peace Commission have been wasted, and Mr. Carnegie must feel that his endowment for international peace is mere mockery in the face of a war the like of which has never been seen in the history of the world. When the end comes, as come it will, there will be little or no need for the Carnegie Endowment for National Peace, for the people of the world will demand that such an unnecessary and wholesale destruction of life and property shall not occur again, and we look for the general adoption by all nations of a plan which will put into effect the arbitration of all differences and the cessation of all army and navy expenditures except those required to dispel internal disorders. That the way for such settlement of the question has been paved by the Carnegie Peace Commission cannot be doubted, and though the present conflict, coming on the heels of widespread efforts to establish international peace, would seem to discredit all efforts that have been put forth, yet in the end it probably will be the basis for rational and a more effective solution of the problem that confronts us.

If any doctor thinks that the Harrison antinarcotic law or even the income tax law will be enforced in a perfunctory sort of way, he has another guess coming. Federal officers have a way of putting in an appearance at inopportune times and demanding in a very courteous but at the same time emphatic way that they be shown all of the particulars concerning transactions that are governed to the slightest extent by federal laws. The doctor who has not taken the precaution to take an inventory of the preparations containing opium, cocain or any of their derivatives held in his possession on March 1, and certified to the same by oath, is very apt to get into trouble. The same is true if the doctor fails to keep an exact record of all names and addresses of patients for whom preparations coming under the provisions of the Harrison law have been prescribed, with an accurate record of the amount prescribed. The physician or specialist who uses solutions in his own office is required to keep a record of dates when stock solutions were prepared, the strength of such solutions and how used. Not many doctors have cause to worry over the income tax, but there are a few physicians who have net incomes of over $4,000 per year ($3,000 if a single man), and such men are required to make a very accurate report. The report must be explicit and made under oath. It requires a careful accounting of all money taken in as income from any source whatsoever, and an accurate record of expenses, losses, etc. To make sure that the

reports are accurate, federal officials occasionally drop around to verify the sworn statements that have been made, and at such times the taxpayer must be prepared to produce accurately kept books, vouchers, tax receipts, check books, bank accounts, canceled notes, etc. To the average doctor this systematic record of all transactions is an unheard-of practice, but Uncle Sam is relentless in his demands that every business must be conducted in a business-like way, and this means the keeping of accurate records.

The American Anti-Vivisection Association is soliciting information from Pennsylvania physicians concerning their attitude on the vivisection question. It seems to be an attempt to secure the support of the physicians of Pennsylvania to the anti-vivisection propaganda. In point of fact the misrepresentation of the aims, methods, and results of animal experimentation has not met with the success expected and it is hoped that a circular letter to physicians, so worded that the answers can be distorted to their advantage, will result in giving the Anti-Vivisection Society the opportunity of claiming that even the medical profession is not united in the support of animal experimentation. Fortunately the *Pennsylvania Medical Journal* has interpreted the scheme and advises the medical men of Pennsylvania that if they care to go on record concerning vivisection they should answer the following questions in preference to the double meaning questions of the American Anti-Vivisection Association:

1. Did you receive a copy of the above letter? (Letter from the American Anti-Vivisection Society?)
2. Do you make use of the results of animal experimentation in your daily practice? (Wassermann test? Salvarsan? Antitoxin? Aseptic Surgery? Animal inoculation for tuberculosis?)
3. Do you believe that animal experimentation in the hands of experts is essential to medical progress?)
4. Do you think the State should permit duly qualified persons to obtain animals for this work from the thousands annually condemned to death in the public pounds?

Name .....
Address .....

The anti-vivisectionists have resorted to so many questionable practices in furthering their propaganda that it can be readily understood that any physician who is unsuspecting may be drawn into a statement which might be garbled or distorted in such a way as to carry the impression that he is opposed to animal experimentation when as a matter of fact he aims to uphold it. We venture to say that there is not one per cent. of the reputable physicians of the country who are not in favor of animal experimentation under proper regulation and control, for every physician knows that animal experimentation offers the only means of studying many diseases, and it has been the only means by which some of the most valuable discoveries in medicine and surgery have been made and developed in the interest of human suffering. If the opinion concerning the value of animal experimentation is to be obtained from the individual members of the profession, by all means let us have that opinion in answer to questions which are pertinent and offered with a view to securing honest and definite answers. Any jugglery of the questions and answers spells trickery and dishonesty.

The Editor is losing his hair, but is pleased to learn through *The Journal of the American Medical Association* that baldness is simply a manifestation of the transitional stage in man's evolution and is not an evidence of early piety, inherent cussedness or any of the other complimentary and uncomplimentary attributes that are facetiously charged up by sympathetic friends as the cause of the Editor's afflictions.

The hair on the body now is the vestige of a former abundant coat which some of our scientists who believe in the Darwinian theory would have us believe was of very great protection to our simian ancestors as they gamboled in the forests, unadorned by clothes, and hung by their tails when sunning themselves on a chilly morning. In the economy of nature, structures atrophy and disappear when they cease to have function, and the need of warmth and other protection afforded by the hair is no longer of great importance to man now that he has advanced to the point where he decorates himself with clothes. Man now uses a hat instead of relying for protection of his head on a shock of hair as his ancestors did, and as a result, in spite of all his coaxing, the shock of hair gradually is vanishing. *The Journal of the American Medical Association* says that this does not mean that we can save our hair by discarding our hats, as is the rather common custom of certain college students and others having peculiar ideas and conspicuous eccentricities. We are a result of our ancestors, and to save our hair we would have to discard the hats of all our ancestors for scores of generations back.

According to this view, heredity is one of the great causes of baldness, though mistreatment

of the hair is also an important factor. Daily wetting of the hair, especially if no attention is given to drying it, keeping it poor in oil by excessive use of soap and water without supplying any fat in place of that removed, failure to keep it clean, excessive exposure to sunlight, the indiscriminate use of drugs, particularly "hair tonics," and overzealous treatment by barbers and hair dressers—all of these causes are influential in the production of baldness and are to be guarded against, particularly in the care of hair of those who already have a predisposition to the condition.

The care of the hair to prevent baldness or to stop the progress of baldness includes keeping the scalp clean, brushing the hair daily and not permitting the hair to remain dry and lusterless from lack of oil, but if necessary apply oil lightly (the best applications are olive oil, sweet almond oil, petrolatum or liquid petrolatum). Keeping the hair devoid of all oil is one of the commonest faults of the present tastes as to its toilet. All that is needed is that the hair should have enough oil in it to retain its gloss and pliability. Massage is of some service when the scalp is free from dandruff, but when dandruff is present it is of doubtful value or harmful. Mechanical massage offers no advantages over simple rubbing and is liable to be too vigorous. Great harm may be done by resorting to singeing, vigorous massage and use of "hair tonics" or "hair restorers" applied indiscriminately by overzealous barbers.

DEATHS

A. W. Porter, M.D., died at his home in Loogootee, March 14, aged 88.

Alice J. Woodward, widow of the late Dr. Sheldon G. Woodward of Indianapolis, died March 18.

James A. Modesitt, M.D., formerly of Cory, Ind., passed away at his home in Terre Haute, March 30, aged 71 years.

William Warner, M.D., of Vera Cruz, committed suicide by hanging himself on March 2. He was a user of morphin.

Mary Cornelius, aged 82, widow of the late Dr. William W. Cornelius of Delaware County, died at Muncie, March 22.

Dee M. White, wife of Dr. Charles A. White of Danville, Ind., died at Gulfport, Miss., March 7, where they had gone to spend the winter.

Thomas Madden, M.D., died at his home in Claysville after a short illness. He was of Irish descent and studied medicine in Ireland.

W. B. Gillespie, M.D., aged 79 years, died March 24 at his home in Indianapolis. He was a graduate of the Indiana University and the Indiana Medical College, but he practiced the greater part of his life in Ohio.

Erastus M. Eisenbeiss, M.D., died at his home in Indianapolis, March 29, aged 52 years. Dr. Eisenbeiss was a pioneer in the study and application of Roentgen rays and radium, and his death was probably hastened by burns received while experimenting with Roentgen-ray work. He was born in South Bend, Ind., in 1863, graduated from DePauw University in 1886 and from the Indiana Medical School in 1888, and for several years was demonstrator of anatomy at the Indiana Medical College.

William B. McDonald of New Augusta died March 14 from double pneumonia, aged 65 years. Dr. McDonald was born in Montgomery County in 1851, attended Wabash College, graduated from the Indiana Medical College in 1873, was an intern at the City Hospital, Indianapolis, from 1873 to 1875; superintendent of the institution from 1875 to 1877, and later moved to New Augusta where he built up a large practice. He was a member of the Marion County Medical Society, Indiana State Medical Association and the American Medical Association.

Samuel Sylvester Selvey, a prominent citizen of Dunkirk, was born May 9, 1832, and died March 2, 1915, aged 82 years. In the fall of 1856 he opened an office for the practice of medicine for which he had prepared himself in Flemington, Taylor County, W. Va. In March, 1860, he moved permanently to Indiana and opened an office near Albany, later moving into Albany. In 1896 he graduated from the Miami Medical College at Cincinnati. In 1872 he moved to Dunkirk where his practice increased and eventually his reputation extended to many adjoining counties. In 1887 he was chosen by the people of Adams and Jay counties to represent them in the state legislature.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

The third trimester of the Medical College year began April 1. Commencement is June 23, when a class of twenty-seven will graduate; twenty-five men and two women.

Nineteen of the present Senior class of the Medical School took the examination for hospital service at the City Hospital. There are fourteen places to fill and the questions were sent to Cincinnati, Chicago, Ann Arbor and Philadelphia for competition for places.

There has been installed in each clinic of the Medical College Dispensary a small cabinet for the necessary apparatus of individual clinics. It is expected that each clinician will do—or have done by students under his direction—the necessary daily laboratory work for diagnosis.

The electro-cardiograph ordered several months ago from England at last has arrived and soon will be in use for teaching purposes at the Medical School. A new Roentgen-ray outfit of latest efficiency will be installed in a short time. Three interns from the Senior class are to be selected for service at the hospital. These places are filled on a basis of scholarship on the record of four years of collegiate work.

Since the opening of the University Hospital, June 25, 1914, there have been entered 875 patients in all departments. The free beds of the institution are now constantly filled with patients who come from many different counties. If there be room all that is required for admission to the free beds is a statement from the attending physician of the nature of the illness and a certificate from the township trustee to the effect that the patient is unable to pay for services. The private rooms of the hospital are also well filled, and proving popular with physicians and patients.

The Polk Sanitary Milk Company gave a dinner to the physicians of the city March 25. Dr. Favill of Chicago delivered an address in which he discussed some of the commercial aspects of the dairy business. The company has an ideal plant for the handling of milk products and it is not surprising that it has become a model for many plants elsewhere. While Dr. Favill's address was interesting, we believe the physicians of the city would have greatly appreciated a statement from the company covering the history of the milk from the time it is milked from the cow until it is bottled. The sanitary conditions of the local dairies from which the milk comes, the number of hours between its production and bottling, the temperature of the milk during this time and all the other questions covering the physical conditions from the time it is produced till it reaches the plant are questions which are of vital interest. Perhaps at another time the company will see fit to enlighten the physicians of the city on these important questions.

The Hurty Banquet.—Persons of prominence from many states gathered at the Claypool Hotel last night to pay tribute to Dr. John N. Hurty, state health commissioner. The testimonial, which was in the nature of a banquet, was arranged by the medical fraternity of Indiana and marked the beginning of Dr. Hurty's twentieth year in the service of the state. Hundreds of telegrams from persons who had heard of the banquet or who were unable to accept invitations to attend were received, and in them Dr. Hurty was complimented as a national figure in sanitation and an official of which Indiana should be proud.

The program of speeches that followed the banquet was participated in by representatives of several professions who have long followed Dr. Hurty's efforts in behalf of a healthier and happier people. In addition the committee carried out a program of "stunts" touching on Dr. Hurty's battle against disease, and these made a distinct impression. The "stunts" were given between the courses, the lights being extinguished and "spots" being used.

Governor Ralston presided as toastmaster and addresses were delivered by Vice-President Marshall, Senator John Kern, Dr. W. E. Stone, president of Purdue University; Dr. William Lowe Bryan, President of Indiana University; Dr. Victor C. Vaughan of Ann Arbor, Mich., president of the American Medical Association and head of the medical department of the University of Michigan; Dr. William A. Evans, former health commissioner of Chicago; Dr. Alexander R. Craig, secretary of the American Medical Association; Miss Vida Newsom of Columbus, Ind., president of the Indiana State Federation of Clubs, and Dr. George T. McCoy of Columbus, Ind., former president of the Indiana State Board of Health.

Dr. F. C. Heath read an original poem dedicated to Dr. Hurty. In the course of the banquet the lights were turned off at times and a

number of characters were introduced to show the work that has been accomplished in the past nineteen years.

The first character to appear was a huge microbe that floated in a helpless manner over the heads of the banqueters. A huge sword reposed in the breast of the microbe and a gaping wound showed how Dr. Hurty had killed the creature in the defense of the health of the state.

Another feature was the appearance of Miss Indiana of 1896 and Miss Indiana of 1915. The former was a diseased and sickly maiden and the latter was a perfect specimen of healthy and happy womanhood. Harry Porter appeared twice in impersonations of Old Ben Zoate and Gen. Tubercle Bacillus. Both Ben Zoate and Gen. Bacillus hesitated before Dr. Hurty and shook their fists under the nose of their "arch enemy."

In response to the many words of praise, Dr. Hurty spoke briefly, gave a brief outline of what he had attempted to accomplish as state health commissioner in Indiana for nineteen years. "I have become so accustomed to kicks and complaints that I hardly know what to say," said Dr. Hurty. "I only know that during the past nineteen years I have only followed my inclination, and I am pleased if I have been of any benefit to the citizens of the state. I have been opposed in my work since the beginning and I expect to be opposed as long as I continue to fulfil my duties."

Vice-President Marshall paid a rare tribute to Dr. Hurty as the man who had sent Indiana's fame throughout the world. He declared that the Indiana state health commissioner had successfully worked for the passage of health and sanitation measures that have been copied by the nations of the earth.

"I am not indifferent to the honor there is in service as master of ceremonies on this occasion," said Governor Ralston. "This meeting is a very unusual one. Seldom, if ever, has any citizen of Indiana been paid the tribute of respect and honor the medical profession of Indiana is showing Dr. Hurty by this event, and I congratulate him upon the place it indicates he has in the Hoosier heart and home.

"On the historic battlefield of Gettysburg the immortal Lincoln appealed to his countrymen to dedicate themselves anew to the preservation of the new nation our fathers brought forth on this continent. Dr. Hurty has responded to this appeal of the martyred President by dedicating his life to the cause of the public health. He thinks that prevention is better than cure, and that the greatest wealth the state or nation can possess is public health—that even human character depends on it. Under his guiding hand and through the touch of his genius, Indiana's department of health has done and is doing a great work for the people. Everywhere he is recognized as an authority in his line."

The highest tribute was paid to Dr. Hurty by the hundreds of persons who sent telegrams to the committee in charge of the banquet, in accepting invitations or regretting their inability to attend. Excerpts from some of the messages follow:

Dr. Harvey W. Wiley.—Hurty's work has been fruitful in a great many ways; first, in its thoroughness; second, its spirit, and third, its methods. There is no other state health officer in his class.

Dr. Victor C. Vaughan, President American Medical Association.—I had made a vow that I would not leave Ann Arbor during the month of March, but would stick at my work. However, when the call came to do honor to Dr. Hurty, I felt that it was imperative and that I must obey.

Dr. M. J. Rosenau, Harvard University.—He has been a pioneer in America and a leader of whom we are all proud.

Dr. Henry Baird Favill, Chicago.—One of the great encouragements to men earnestly at work is the stimulus and confidence that can be got out of knowledge of the achievements of men like Hurty.

Dr. George M. Kober, Washington.—The American medical profession has long since considered Dr. Hurty as one of the foremost sanitarians in this country, whose efficient work as a health official has had its influence, not only in your state, but wherever attention is given to public health activities.

Dr. E. C. Levy, Richmond, Va.—There is not a man in public health work for whom I have a more profound admiration or whom I more honor as a man.

Dr. Arthur T. McCormack, Bowling Green, Ky.—I esteem Dr. Hurty as the greatest practical sanitarian which this country has produced.

Dr. Allen W. Freeman, Richmond, Va.—Dr. Hurty is unique in public health work in this country and his work is recognized by all of us as marked by the greatest originality, energy and efficiency.

Dr. W. A. Evans, Chicago.—I am not making speeches this winter, but I am so fond of Hurty, and have for him as an official so much

admiration, that I am glad to avail myself of the invitation to speak at the banquet given in his honor.

Dr. J. W. Pettit, Ottawa, Ill.—Dr. Hurty is worthy of every honor which the profession of Indiana can confer and I am glad to know that he is not a "prophet without honor in his own country."

Dr. Charles A. L. Reed, Cincinnati, O.—I look upon him as distinctly a national force for the uplift of all the people.

That all the health laws in this state are the direct results of the labors of Dr. Hurty was a statement made yesterday by Dr. W. N. Wishard, who has just completed a summary of the laws. The present vital statistics law is considered a model by the Federal government. The following legislation has been passed, according to Dr. Wishard, as a result of Dr. Hurty's efforts: The pure food law, the quarantine law, giving health authorities the right to quarantine contagious diseases; the sanitary schoolhouse law, the medical inspection law, the antitoxin law, a law providing for the regulation of cold storage establishments, laws which made possible the establishing of the State Tuberculosis Hospital and the "anti-fly ordinance" that has been passed by thirty Indiana cities.—Indianapolis *News,* March 13, 1915.

GENERAL

Dr. B. M. Jewell of Hammond has been ill with typhoid.

Dr. James B. Green of Mishawaka has been quite seriously ill.

The new hospital at Washington was opened to the public March 18.

Dr. P. M. Layne (retired) of Crawfordsville has been seriously ill.

Dr. D. S. Linvill of Columbia City has been suffering an attack of pneumonia.

Dr. Frank E. Seal of Brookville is taking a three months' trip through the West.

Dr. and Mrs. L. C. Cline of Indianapolis have returned from a vacation trip to Florida.

The contract for the new Hope Hospital at Fort Wayne will be let about the middle of April.

Dr. and Mrs. M. H. Young of Brazil have returned from an extended vacation trip to Florida.

Dr. George W. Newell of Peru is planning to enter the Red Cross service in either Poland or Servia.

An eight pound son is the new arrival at the home of Dr. and Mrs. D. D. Johnstone of Kendallville.

Dr. L. C. Rentschler of Centerpoint was married on March 28 to Miss Ruth Burger of Clay City.

Dr. and Mrs. H. C. Davisson of Hartford City have returned from a several weeks' vacation at Asheville, N. C.

Dr. G. L. Shoemaker of North Manchester has returned from a business trip to Louisiana and other southern states.

Dr. B. A. Blosser, formerly of Fort Wayne, has located at Fremont, Steuben County, for the practice of his profession.

Dr. A. J. Blickenstaff of Wolcott has sold his practice and will locate in New York State for the practice of surgery.

Dr. and Mrs. Walter H. Hutcheson have returned to their home in Greencastle after an extended trip through the South.

Dr. George H. Smith of Newcastle, has returned from New York City where he has been attending special lectures and clinics.

Dr. H. C. Michaels of Fort Wayne has been appointed as poor physician for Wayne Township to succeed Dr. M. W. Tinkham.

Dr. C. C. Rozelle of LaGrange has been elected president of the LaGrange County Anti-Tuberculosis Society recently organized.

Dr. Luther Hirt of Brazil has returned from New York where he has been taking post-graduate work in medicine and surgery.

The practice, office and office equipment of the late Dr. Paul Trees of Maxwell has been purchased by Dr. S. D. Clayton of Ohio.

A free tuberculosis clinic has been established at New Albany under the management of the Floyd County Anti-Tuberculosis League.

Drs. Melvin H. Young and Luther Hirt of Brazil have combined their offices and formed a partnership for the practice of medicine.

Dr. J. W. Green of Leeds, S. D., will locate in Albion, May 1, and will be associated with his father, Dr. W. T. Green, in the practice of medicine.

Dr. S. A. Shoemaker of Bluffton has purchased property at the corner of Cherry and Johnson streets and will erect a new office building.

Bartholomew County is working for a new county hospital which is to be conducted under the plan "With equal rights to all and special privileges to none."

March 25 was observed as Health Day at Auburn. Mayors of nearby towns gave addresses. Dr. King of the State Board of Health was the principal speaker.

Jerome J. Keene of Indianapolis, a member of the Indiana Board of Pharmacy, has been appointed inspector for Indiana to enforce the Harrison Narcotic Law.

It is reported that there is a shortage of emetine hydrochloride but the Abbott Alkaloidal Company announces that it is prepared to fill all orders for this alkaloid.

Drs. J. E. Metcalf and T. B. Templin of Gary have formed a copartnership under the firm name of Templin & Metcalf. They will be located in the Security Building.

Dr. A. A. Young of Hammond has returned from New York City where he has been taking post-graduate work in the New York Post-Graduate and Polytechnic hospitals.

The Ninth Councillor District will hold their annual meeting at Lebanon, Ind., May 20. Dr. J. R. Ball of Lebanon is president and Dr. Fred A. Dennis of Crawfordsville is secretary.

Dr. Charles Scribner, a practicing physician of Louisville, Ky., died recently at the home of his brother at Bloomington, Ind. Dr. Scribner was formerly from New Albany, Ind.

Dr. F. M. Gardner of Bloomington has recently received his commission as major of the medical corps of the First Regiment Indiana National Guard Infantry. Dr. Gardner has been regimental surgeon with the rank of captain for a number of years.

Dr. D. S. Quickel and family of Anderson, who were called to Harrisburg, Pa., on account of the illness of the doctor's father, have been detained there on account of the illness of their son.

The Duke's Hospital at Peru has been reorganized with the following officers in charge: President, Dr. George Van Mater; vice-president, Dr. John P. Spooner; secretary, Dr. Melvin McDowell.

The offices of a number of physicians in the Hume-Mansur Building, Indianapolis, were broken into recently by some dope fiend in search of drugs. Like reports come from towns all over the state.

Drs. L. B. Hill and H. R. Kyte of Seymour recently have been appointed members of the Pension Examining Board of Jackson County to fill the vacancies caused by the deaths of Drs. H. R. Lucky and L. Ruddick.

Dr. E. P. Busse has retired as superintendent of the Southeastern Hospital for the Insane at North Madison and has been succeeded in the work by Dr. James Milligan, formerly chief physician at the State Prison at Michigan City.

Dr. J. A. Craig of Gary has taken charge of the practice and sanitarium formerly conducted by the late Dr. D. J. Loring at Valparaiso. Dr. Craig has moved his family to Valparaiso, but still maintains his office in Gary three days out of the week.

Dr. and Mrs. J. C. Hardesty of Newcastle left March 29 for an extended trip through the South and West. They will visit New Orleans, La.; Houston and El Paso, Texas; Globe, Ariz.; Los Angeles, San Francisco, Salt Lake City and Denver.

The doctors of East Chicago, Indiana, have organized with the following officers: President, Dr. A. G. Schlieker; vice-president, Dr. Robert Spear; secretary and treasurer, Dr. S. Goldberger. They will be affiliated with the county medical society and will hold two meetings per month.

The seventh Pan-American Medical Congress will meet in San Francisco, June 17 to 21, inclusive. The Congress will meet in seven sections, viz.: (1) Medicine; (2) Surgery; (3) Obstetrics and Gynecology; (4) Anatomy, Physiology, Pathology and Bacteriology; (5) Tropical Medicine and General Sanitation; (6) Laryngology, Rhinology and Otology; (7) Medical Literature. All members of the organized medical profession of the constituent countries are eligible and are invited to become members. Membership fee is $5.00. Advance registrations are solicited and should be sent with membership fee to Dr. Henry P. Newman, Timken Bldg., San Diego, Cal.

The Medical Society and the Retail Druggists' Association of Vigo County have issued a few helpful suggestions on the Harrison Anti-Narcotic Law, which are as follows:

GET THE HABIT—Write or have printed your register number, your patient's name and address, your name and address, the date, on all your prescriptions, you will find it a good check.

BE CAREFUL when prescribing proprietaries containing narcotics to always use your register number, etc.; it will save confusion.

A DRUGGIST cannot accept a prescription containing any narcotic over the phone.

CO-OPERATION is going to make this law the best ever enacted.

REMEMBER the doctor has everything to gain, the druggist everything to lose, so don't ask him to do anything that is not strictly within the letter of the law.

REMEMBER it is necessary for a doctor to use official order blanks in purchasing hypodermic tablets apomorphia, morphin, codein, cocain solution or other narcotics coming under this act.

TO FACILITATE the duties of the inspector, druggists should keep a separate file of all prescriptions coming under this Act.

REMEMBER the dispensing doctor must follow all regulations as laid down for the druggist.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Cholera Serobacterin, Mulford (Sensitized Cholera Vaccine).—Marketed in packages of three syringes. H. K. Mulford Co., Philadelphia.

Meningo-Serobacterin, Mulford (Sensitized Meningococcus Vaccine.)—Marketed in packages of three syringes. H. K. Mulford Co., Philadelphia.

Typho-Serobacterin Mixed, Mulford (Sensitized Typhoid Vaccine).—Packages of three syringes containing graduated mixtures of killed sensitized bacillus typhosus, killed sensitized bacillus paratyphosus A, and killed sensitized bacillus paratyphosus B. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, March 13, 1915, p. 909).

Radium Chemical Co.: Standard Radium Solution for Bathing, Standard Radium Solution for Drinking, Standard Radium Earth, Standard Radium Compress.

The Franco-American Ferment Co.: Lactobacilline preparations: The Lactobacilline preparations now being advertised direct to the public the Council has voted that their acceptance be rescinded and that these products be omitted from New and Nonofficial Remedies. A report explaining this action has been authorized for publication.

CORRESPONDENCE

HONOR DR. W. C. CHAFEE OF HUNTINGTON

To the Editor:—In the absence of our Secretary, Dr. F. B. Morgan, I am sending you as an enclosure a copy of the newspaper report of the last meeting of the Huntington County Medical Society. This meeting was rightly named "The Chafee Meeting," and was held in honor of Dr. W. C. Chafee, who upon this day had reached his 80th birthday. Dr. Chafee has been fifty-five years in the practice of medicine, and at the present time is still actively engaged therein. He was one of the organizers of the Huntington County Medical Society, has been president of it in the past, and has always been active in professional circles. Dr. Chafee is held in high esteem, not only as a professional man, but as a good citizen of the city and county. His long career has been an active and honorable one, and the Medical Society of Huntington County, in honoring him, felt as though it were honoring itself at the same time. We feel that this record should be spread upon the pages of The Journal as an incentive to those who are constantly in doubt. It is therefore at the request of the medical profession here that I ask you to make special mention of this occasion and of Dr. Chafee's career in the next number of The Journal.

With kindest fraternal greetings, I am,

Yours very truly,

M. H. Krebs, M.D.

CONTRACT WORK BY MEDICAL SOCIETIES

Vincennes, Ind., March 30, 1915.

To the Editor:—Can you give me any information concerning the plan adopted by some medical societies of doing the township pauper practice by order of the trustee, thus increasing the funds of the society? Any information will be appreciated.

Respectfully,

M. L. Curtner,

Secretary Knox County Medical Society.

(Several county medical societies in Indiana make contracts with the proper authorities for doing county pauper medical work. Noble County has had such a plan in operation for a number of years and those interested report that it is eminently satisfactory. To make the plan effective the reputable physicians of the county should refuse to bid for the work except through the county medical society, and the authorities should be told that the work will be done thoroughly and well, but that the fees, while less than customarily charged, should be something more than a mere pittance. The work is then divided among the members of the society, each agreeing to do his share in his given locality, and where there are several physicians in one locality the work is divided equally—generally by having it understood that one doctor shall do the poor practice for a certain period and be succeeded by another doctor who does it for a like period, and so on until the contract is fulfilled. Payment for the services is made direct to the medical society and the amount is prorated among the members, or, as is the practice with some societies, the amount is used for maintaining a medical library, club rooms, or for giving the members and their wives some social entertainment. The advantages of the plan are that it does away with the objectionable bidding for the work, often with attending bids so low that only the most incompetent physicians compete for the work, with corresponding unfairness to the worthy poor who are deserving of better treatment. It also places the pauper practice on a little higher plane in all particulars, with corresponding benefit. The secretary of the Noble County Medical Society has been asked to furnish a communication on this subject for publication in the May number of The Journal. —Editor.)

PROPOSED DISCUSSION OF THE CANCER QUESTION

Scranton, Pa., March 1, 1915.

Dr. Charles N. Combs, Secretary Indiana State Medical Association, Terre Haute, Ind.:—As you may know, this committee has worked on the question of reducing the mortality from cancer since its appointment five years ago. Our work has been directed to educating the laity and also improving the attitude of the medical profession with a view to obtaining more frequent early diagnosis, prompt treatment, and hence fewer deaths. From our work in the past five years we have felt that much the most important thing to do at the present time is to improve the attitude of the medical profession itself. Figures that we recently collected in Pennsylvania show that in this state the physician has his cancer cases under observation for an average period of over one year before radical treatment is begun.

In order to increase the interest of the medical profession we are now working on a plan by which a large number of the medical journals in this country will have a special Cancer Number in July. The journals will print a large number of cancer articles and have strong editorials on this campaign, and furthermore the journals that take part are contributing a full page advertisement drawing further attention to this matter. Of course, our own activities are properly confined only to this state but it has seemed to us that it is quite an opportune time to ask other states to take part in this present cancer campaign. We are arranging for all the county societies in this state to have a special symposium on cancer in June and we wish to know if you will not take this matter up with the county societies in your state and urge them also to have special cancer meetings or special symposiums during the month of June. I am sure that many of the counties would be glad to join in on receipt of a proper letter from you.

In our own state we have found that it often adds a great deal to the interest in smaller counties to have the State Society get some prominent member in a larger city to go to the smaller county and give a special address on cancer.

We feel that this is a very valuable opportunity for the organized medical profession to attack a disease which at present kills about 75,000 of our people each year and we feel that cancer meetings all over this country in

June to be followed by a flood of cancer literature in July will have a very valuable and lasting effect. We believe that this movement will be considered a great credit to the organized medical profession and American medical journalism. We hope very much, therefore, that you will join in making this a national campaign and urge your counties to devote one of their June meetings to cancer.

Yours very truly,
The Commission on Cancer of the Medical Society of the State of Pennsylvania.
J. M. Wainwright,
Chairman.

PUCK ON CHRISTIAN SCIENCE

Editor The Journal:

For fear you may not have seen Puck's "latest," we are calling your attention to the edition of April 15, 1915, containing an editorial on the subject of legalizing the practice of Christian Science. The editorial is entitled "Enter Prayer, Exit Pill," and copy of same is appended herewith: "The day that the average physician displays a name plate on his door announcing that he is ready for practice, it is safe to assume that an investment has been made in his education approximately as follows:

From four to seven years at a university, representing a minimum of	$3,000.00
Living expenses during university course, minimum	3,000.00
Books, instruments, laboratory charges, etc.	1,000.00
Expenses during hospital internship	1,000.00
Total cost of medical education	$8,000.00

"In the course of this training, extending over from five to ten years of his life, the physician has received instruction at the hands of men whose entire careers have been devoted to mastering the practice of medicine. Until he is past 35 years of age, his career is one constant, painstaking preparation for the protection of humanity against disease.

"A law pending in New York proposes to set all this preparedness at naught. The legislature of that state has been asked by the Christian Scientists to legalize the 'practicing' of their healers.

"The Christian Science 'healer' enters upon his activities with the following stock in trade:

One copy of "Science and Health," by Mary Baker Eddy	$ 3.00
One satin-faced Prince Albert	35.00
	$38.00

Thus equipped, he can pray over a virulent case of smallpox until the infection sweeps the neighborhood. He should worry! There is no such thing as smallpox; the patient is merely in 'error.' Epidemics under the healer's benignant influence might ravage communities; it would be quite unnecessary to take steps to check them; there is no such thing as illness. As soon as the unfortunate victims receive faith through Mrs. Eddy's tract at $3 a copy, the scourge will subside.

"It is all very simple—buy the book!

"Weird incantations over the grievously ill passed out of American history when the last Kickapoo turned his toes to the setting sun. Before the steady stride of enlightenment, the old lady who wore red yarn around her ankle to ward off chilblains has linked arms with her consort who carried a shriveled horsechestnut in his vest pocket as a cure for rheumatism, and together they have passed into the Great Beyond, a little earlier, perhaps, than had their ailment been attended to by a skilled physician.

"Superstition, whether set forth in 'Science and Health,' or Hostetter's Almanac, is banished from most intelligent minds. Diseases that a generation ago spelled certain fatality are now under the doctor's control. They are not cured by prayer, nor by sorcery. Mary Baker Eddy was an extremely commonplace New England woman. It has been our privilege to read some of her early correspondence in the original; much of it was illiterate and none of it convincing.

"Licensing the Christian Science healer is a dangerous retrogression. If it meant the substitution of prayer for Peruna, we would advocate it; but we cannot imagine a condition which might place control over a deadly epidemic in the hands of a zealot who enters upon his medical career with an investment of $38."

Sincerely yours,
Constant Reader.

CHRISTIAN SCIENCE CONTROVERSY

Indianapolis, March 23, 1915.

Editor The Journal:—There are hundreds of thousands, and probably millions, of people in the world to-day who would be dumbfounded at the injustice and inaccuracy of your recent editorial on the question of fees charged by Christian Science practitioners for their ser-

vices, and in which the amazing statement is made that no one ever heard of their doing anything for charity. The only explanation conceivable of such sweeping denunciation is that the writer of the article did not expect to be taken seriously. Almost any Christian Scientist could put a sincere inquirer in touch with indisputable evidence as to how the average Christian Science practitioner spends hours and hours of time ministering to those who have no means, and without the slightest hope of compensation. It is not uncommon to find them contributing funds to material support while giving "a cup of cold water in Christ's name." (Science and Health, p. 570.) It should be borne in mind, and without a particle of criticism, that a large number of those who turn to Christian Science have spent their all on material modes of treating disease, and frequently have no means of support. No genuine Christian Scientist claims, or wants to claim, that physicians do not often dispense charity.

It is not strange, nor is it in any way contrary to the teachings of Christian Science, to find that Christian Science practitioners are compelled to eat, to wear clothes, to pay rent and taxes and to meet ordinary living expenses. The necessities pass from producer to consumer almost entirely on the basis of money, which is the recognized medium of exchange. There is, therefore, no reason why a Christian Science practitioner should be expected to live without due compensation for his time and labor in the form of the customary medium. The statement that Jesus made no charge for his services, and because Christian Scientists heal the sick as he did they should make no charge, is entirely void of the force of argument, because the great Teacher bade his disciples go forth on missions of healing with this admonition: "The laborer is worthy of his hire." It is but reasonable to recall too that the medium of exchange was entirely different then as compared with now. At the time the Master was giving the great truths about God and man to mankind it was the custom for the one benefited to bestow lands or goods upon his benefactor, which custom has become almost obsolete, although an exchange of goods and payments in goods were much more common a few generations back than now.

"IN HIS STEPS?"

Christian Scientists do not claim to have attained unto perfection, but there is what might be called a standard toward which all Christian Scientists are working. We find it in the words of Mrs. Eddy on page 294 of Miscellaneous Writings: "A real Christian Scientist is a marvel, a miracle in the universe of mortal mind. With selfless love, he inscribes on the heart of humanity and transcribes on the page of reality the living, palpable presence—the might and majesty!—of goodness. He lives for all mankind, and honors his creator."

Yours very truly,
S. T. Downs,
Christian Science Committee on Publication, State of Indiana.

Answer.—The item to which exception is taken appeared in an editorial note in the February number of The Journal and is as follows:

"Some of the prominent Christian Science healers are making a lot of money in their efforts to relieve suffering mankind. The charges of the ordinary doctor look like charity charges as compared to the bills rendered by Christian Science healers, for those smooth individuals do not hesitate to tack on a good fee for everything they do, and no one ever heard of their doing anything for charity. It is a strange thing that a sect which professes to be Christian in its conduct should devote no time or attention to charity of any kind whatsoever. The sick poor can be sick and die for all that the Christian Scientists care. Another thing which strikes us as being peculiar is that though the Christian Scientists say that they are doing their healing in Christ's name they are not following in His footsteps, for Christ never charged for healing the sick, and He sought the poor and lowly, which evidently is contrary to the finer feelings of the aesthetic Christian Scientist of this year of Our Lord, 1915."

In view of knowledge that is common property we do not feel that any word of retraction or apology is indicated. In this instance, as in others when Christian Science is attacked, the "Christian Science Publication Committee" comes forward with a defense that, as usual with Christian Science defense, deals with generalities and avoids any specific or tangible evidence to disprove any of the charges preferred.

If the Christian Scientists, as a sect, have erected and maintained any benevolent institutions or have contributed in a substantial way to the cause of charity or philanthropy we have failed to hear of it. We never have heard of a Christian Science "practitioner" visiting any of the institutions maintained at public or private expense for the care of the indigent and needy, to offer spiritual consolation or to convince some poor sick and disabled inmate that his ills and misfortunes are a figment of the imagination. Neither have we heard that any "practitioner" ever has offered his services to relieve sickness, injury or distress during some great calamity. Is there a "practitioner" who is willing to take an oath to the effect that he has devoted gratuitously any considerable amount of his valuable (?) time and Christ-like (?) skill to the task of healing some luckless indigent person who thinks he is sick? If "absent treatment," the most colossal of all fakes, is to be charged in favor of the Christian Science side of the controversy, then we surrender.

As a matter of fact, we know of instances in which deserving poor persons have sought the ministrations of certain Christian Science "practitioners" and through one excuse or another have received no attention. On the other hand, we are creditably informed of instances where Christian Science "practitioners," without solicitation, have deliberately forced their attentions on some indisposed person, and then had the nerve to render a bill for not only personal attention but "absent treatment" as well. We know of an instance where a person suffering from impaired hearing from a collection of wax in the ear canals was mulcted to the tune of over $100 for Christian Science treatment, "absent" and otherwise, whose hearing was immediately restored after the use of an ear syringe and warm water in the hands of a skilled physician. Were the fees paid the "practitioner" extortionate, or was the patient separated from his money in the name of religion? And isn't it the height of absurdity to pay no attention to the question of cause and effect, as exemplified in this case of deafness from mechanical means? "Oh no," say the Christian Science followers, "It is not scientific to examine the body in order to ascertain whether we are in health. . . . The remote cause of all disease is mental. . . . Realize that the evidence of your senses is not to be accepted in the case of sickness any more than in the case of sin. . . . You command the situation if you understand that mortal existence is a state of self deception." Can anyone, except a deluded fanatic, believe this to be other than a doctrine of hypocrisy and deceit?

We are willing to admit that Christian Science influence, or any other decidedly optimistic influence, whether it goes by the name of Christian Science or voodooism, may have a

beneficial effect on a lot of apprehensive and imaginative persons who really have nothing the matter with them. But that Christian Science ever cured any definite pathologic lesion we are not willing to admit, and we have never seen any evidence to that effect which would bear analysis. In fact there are thousands of hopeless and helpless incurables in this country, belonging to the poorer classes, who would gladly embrace Christian Science if it offered the faintest hope of affording relief, and many seriously ill but deluded persons have unnecessarily lost their lives as a result of pinning their faith to Christian Science and failing or refusing to employ those material means for securing relief which investigation and experience have proved to be of unquestioned value if not curative in practically all of such cases. Occasionally an incurable having means falls into the hands of a Christian Science "practitioner" only to find out later, to his sorrow, that it was the "Almighty Dollar" which secured the attention. We know of one such case now—an absolutely blind person who has been promised sight through Christian Science treatment. A more damnable piece of rascality and fakery has never been foisted on a trusting and unfortunate human being who is willing to give up his last penny to recover a function that has been lost for all time. And yet they call this Christian Science! It is not Christian, it is dishonesty parading in the guise of religion. It is not science, it is the most cruel of fakes. What is back of it? The greed for money. In the guise of religion a shrewd and sordid commercial organization has arisen which countenances and practices the most brazen deception for purposes of gain. No physical care is given to the sick and no sympathy is offered to the afflicted. Humanitarianism and altruism have no place in the Christian Science teachings and practices. Hypocrisy and deceit are at a premium.

In the words of one of our clerical friends, "Christian Science is a religion only for the well-to-do; it has no message for the poor and afflicted, no care for the sick, except to tell them that they do not suffer; it has founded no charitable institutions; it maintains no free hospitals, but demands and wrests payment of the "Almighty Dollar" for all the boons its priests and priestesses and divine healers may confer—shamelessly opposed to Christian altruism, flying in the face of the Gospel of Jesus Christ, and striking down the divine principles of pity, mercy and unselfishness."

SOCIETY PROCEEDINGS

THIRD DISTRICT

The meeting of the Third District Medical Society was held at West Baden Springs Hotel, West Baden, March 18. The program was carried out as follows: "What Is So-Called Rheumatism?" H. C. Sharp, West Baden; "Progress of Serum and Vaccine Therapy," R. W. Harris, New Albany; "The Role of the Colon in Therapeutics," H. K. Carey, Bedford; "Acute Bronchitis," J. W. Baxter, New Albany; "Complications and Treatment of Pneumonia," Frank B. Wynn, Indianapolis; "Report of Case of Puerperal Sepsis," William Moore, New Albany. In addition to this, Dr. Frank B. Wynn gave an interesting talk on Medical organization and outlined the plan for the State Association session in September.

The following officers were elected for the coming year: president, William Moore, M.D., New Albany; secretary, H. K. Carey, M.D., Bedford; councilor, Jos. D. Heitger, M.D., Bedford.

Adjourned. H. K. Carey, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Meeting March 2, 1915—Hotel Washington

Mr. Tepay, a representative from the Internal Revenue Office, appeared before the Society on request and explained the Harrison Narcotic Law.

Members of the society were allowed to ask questions, which privilege was appreciated by them.

PROGRAM

Dr. Chas. R. Sowder reported a case of "Cerebral Abscess."

Mrs. W., white, aged 37, admitted to Methodist Hospital December 8. She had been in a semi-comatose condition for five weeks. Diagnosis of cerebral abscess was made; operated by Dr. Clark. The bone was carious, beneath which on removal the dura looked dark and dead. A liberal incision through membranes liberated six ounces of creamy pus. An examination by Dr. Alburger showed pure culture of staphylococcus. A drainage tube was left in abscess cavity and usual dressing applied. Patient left surgery with pulse 130, temperature 97, respiration 25 at 1:00 p. m. Two and a half hours after operation, temperature, 104 axilla; pulse, 176; respiration, 60; rapid and shallow pulse, temperature and respiration continued about the same for several hours. Strychnin sulphate gr. 1/30 and 1 c.c. digipuratum four hours had no appreciable effect.

At 8:30 p. m., December 22, thirty-six hours after operation, pulse rate was 164, weak and small; temperature, 101 axilla; respiration, 30. At this time ½ c.c. of pituitrin, Lilly, was given. In fifteen minutes pulse dropped from 164 to 118. Volume and quality improved. Each fifteen minutes pulse rate was taken. At 9:00 p. m., rate 120; at 9:15 p. m., 140; at 9:30 p. m., 154; at 10:00 p. m., 164. At 10:30 hypodermic of ½ c.c. pituitrin, with noticeable effect. At 10:40 pulse rate, 120; 11:15, pulse rate 126; 11:30, pulse rate 128; temperature, 99.8; respiration, 24; 2:30 a. m., pulse rate 120. Patient still very restless. Pituitrin

ordered discontinued. Digipuratum 1 c.c. hypodermic at 4:00 a. m.; pulse 130, respiration, 28; temperature, 99.6. At 8:00 a. m. digipuratum 1 c.c.; temperature, 100.4; pulse, 164; respiration, 28; at 8:30 a. m., pulse 164; ½ c.c. pituitrin at 8:40, pulse, 118; 9:00, pulse 120; 9:15, pulse 140, vol. good; 9:30, pulse 154; 10:00, pulse 164; 10:30, pituitrin; 10:40, pulse rate 120. Pituitrin was now ordered ½ c.c. hypodermic each two hours and was continued until 6:30 a. m., when ordered discontinued unless increase in pulse rate. At 2:40 a. m., pulse rate 132 and very weak; ½ c.c. pituitrin; 2:45, pulse 116 and volume good; at 6:30, pulse 132 and weak; pituitrin, ½ c.c.; at 6:40, pulse 100 and stronger. Pulse remained below 124 until 8:00 a. m. of the 24th when rate was again 130; pituitrin, ½ c.c.; and at 8:30, 110. At 2:00 p. m., temperature, 101; pulse, 140; respiration, 24; pituitrin, ½ c.c.; at 2:15, pulse 118. The pulse from this time on did not exceed 120 and heart medication was discontinued, save small doses of strychnia. Convalescence has been uneventful. The patient is practically well save a small granulating surface in the scalp incision. I desire to emphasize the apparent value of pituitrin in this case and believe that in it we have a valuable aid in controlling the heart in such conditions.

Paper: "A Review of Literature on Benzol Treatment of Splenomyelogenous Leukemia," by Dr. M. Jos. Barry.

Benzol comparatively new therapeutic agent. Toxic action first noted by Santesson, whose attention was directed to purpuric eruption caused thereby. Dr. L. Selling in 1910 first demonstrated true nature of the poisoning, clinically and experimentally. He proved it to be an aplastic anemia characterized by purpuric eruptions, marked leukopenia, slight changes in the red cells, and aplastic bone-marrow.

Von Koranyi, of Vienna, in July, 1912, first reported cases of leukemia treated with benzol, acknowledging the idea was suggested by Selling's work. His remarkable results led other clinicians to try the treatment, among others Kiralyfi, Stern, Klein, Muhlmann, Tedesko, Wachtel, Neumann, Klemperer, Hirschfeld and Pappenheim; and in this country, Billings, Barker and Gibbes, Smith, Sappington and Pearson, and Graham. Most of the reports have been favorable; a few unfavorable.

The usual clinical course of a case so treated is as follows: Rapid reduction in the white cells; gradual increase in red cells; reduction in the size of spleen; general improvement in health and weight. Benzol is a dangerous drug and patient should be carefully watched for signs of poisoning, and blood counts should be made every few days.

Benzol has been used in other conditions, as lymphatic leukemia, acute leukemia, Hodgkin's disease, pernicious anemia, polycythemia, etc., with some success, but does not reach the underlying pathologic condition so exactly as in myeloid leukemia.

Dr. Jane Ketcham reported a case of "Splenomyelogenous Leukemia."

Patient, woman, aged 29, married, presented herself to Dr. Barry and myself at Bobb's Dispensary, July 18, 1914. Complaint, rapidly growing abdominal tumor. Family history, negative for tuberculosis and lues. Personal history, attack of typhus at 19, right hemiplegia at 24, good recovery from both. No history of miscarriages. Examination: Lungs negative; heart displaced to 1½ inches to right of sternum. Blowing systolic murmur heard over mitral valve, not transmitted beyond precordium. Abdomen flaccid and relaxed, no tenderness, spleen markedly enlarged, rests on crests of ilium; extends 2 inches beyond midline, notch plainly felt. Differential count shows 41 per cent. myelocytes, 72 per cent. polymorphonuclear leukocytes, hemoglobin estimation, 51 per cent. (Sahli). Patient was referred to the Long Hospital, kept incumbent on a forced diet and benzol treatment instituted. Weekly blood counts were made; highest white count, 450,000; lowest red count, 3,000,000. Highest benzol, 35 m. t. i. d. Benzol discontinued when white count reached 130,000. Lowest white count, 2,300. Present status, hemoglobin estimation, 69 per cent. (Sahli); reds, 4,000,000; whites, 7,000. Spleen not palpable. Patient has gained 27 pounds and myelocytes have entirely disappeared from the blood.

Dr. Barry and Dr. Ketcham feel that a clinical cure has been made.

DISCUSSION

Dr. Emerson: It is seldom that one has the pleasure as well as the privilege of discussing a case so carefully studied and so well presented as this. A few years ago there seemed to be no cure for leukemia and perhaps the only case on record in which a case had gotten well (as confirmed later by autopsy following death due to other cause) was one which was evidently cured by an attack of acute lobar pneumonia. But now by means of Roentgen-ray, we can hold a case pretty well under control, and by benzol are able apparently to cure it, although, of course, it will take some years yet before we can prove this. The anemia following benzol administration is now regarded as the best illustration of aplastic anemia. Formerly our type of this was chlorosis. This means that we must modify somewhat our definition of aplastic anemia. Formerly it meant anemia due to inability of the hemopoietic organs to supply the necessary number of red blood cells, but now it means the anemia which follows necrosis of the bone marrow, and this occurs only after the necrosis has quite inhibited the production of myelocytes. In other words, the benzol first kills the leukoplastic tissue while the erythroblastic tissue seems in no way injured, and later the erythroblastic tissue is destroyed. It is interesting that the proper treatment in leukemia is benzol or Roentgen ray, and that latter is one of the best treatments for cancer. Of course, one cannot avoid mentioning former idea of Pappenheim (I believe) that leukemia is due to malignant disease of bone marrow, the disease differing from that elsewhere in the body, since hard cortex of the bone prevents tumor formation and, therefore, white blood cells corresponding to tumor cells are squeezed out into circulation. In this connection, I was much interested last winter on seeing at the University of Pennsylvania the records of the several thousand white mice which had been bred to demonstrate that cancer of mice can be transmitted by inheritance. It is interesting that the worker found that leukemia occurred in this series under the same conditions as cancer. That being the case, I suppose we may look forward with confidence to a

report soon of the treatment of malignant disease by benzol.

Dr. Wynn: This case and report of literature is admirably given. I have not seen a case treated before in this way. Whole subject of leukemia has developed in last few years. I presented a case twenty years ago. Cited a case treated by Roentgen ray. Commented on fine work done in this case in blood microscopy. Average case does not come for regular treatment. Present case is not cured and must be watched.

Dr. Barnhill: Relative to brain abscess case.

Diagnosis was rather remarkable. Many cases have brain symptoms with brain abscesses. Difficult to discern source of infection. Ninety-five per cent. due to oral cavity or sinus infection. Headache and comatose condition were largely responsible for diagnosis of brain abscess. Showed a new instrument for discovering brain abscesses.

Dr. Hadley: The small tumor removed from scalp might have been responsible for meningocele, which in time might have been the cause of abscess.

Dr. Charlton: Cited case treated with benzol, who died.

Dr. Hamer: Cited a case treated with benzol and cured. Developed double-ear trouble and recovered. Still had large spleen.

Dr. Hutchins: Case of brain abscess came late for treatment: Went into brain anatomy showing how diagnosis of abscess could be made. Cervical glands in affected side much enlarged. Believe abscess derived from diploe infected by original tumor.

Meeting March 9, 1915—Hotel Washington

Paper of evening was by Dr. Arthur Beifeld, Chicago, on "Angina Pectoris."

This, a disease of greatest importance, has received very little attention of late among medical men, and one is surprised at meager references to it in recent literature. On the other hand, the general press contains almost daily some article referring to death from heart failure of some individual of prominence and in a large proportion of cases this can be attributed to angina pectoris. This state of affairs can be explained to some extent by the fact that this is not a hospital disease. The better class of patients, when informed of their condition, prefer to change their mode of living either at home or in some more suitable clime, while the less fortunate man says to himself that the pain is from his stomach and in consequence is of little or no importance. Thus the hospital does not enter into the thoughts of either. Therefore, statistics of institutions do not give a fair estimate of prevalence of this disease, but case histories of men in consulting or general practice serve to emphasize its frequency in a general routine.

The causal factors that bring about symptoms of angina are usually attributed to arteriosclerosis and particularly when it involves the coronary arteries. However, this feature is not present in a large proportion of cases that come to autopsy, so that some other condition also must act as a cause. Frequently my attention has been called to similarity of this condition to so-called gastric crises, or more particularly to disturbance of circulation of extremities which we term intermittent claudication. In latter, spasm of muscular mechanism of arteries is a prominent feature, so that it seems possible that this may be the additional influence present in many cases of angina pectoris. This is undoubtedly the case in the group which are described as anginas of vasomotor origin and will possibly serve as an explanation for many of the other forms.

Many causative factors may result in bringing about this condition in the circulation and among the common ones, which may be mentioned, cold is of importance. Chilling of body is often predisposing influence which initiates a paroxysm of angina and it seems very likely that some of the nocturnal attacks may be attributed to chilling that may take place during sleep. Mental disturbances frequently are the preceding influences and these are usually of the distressing type, such as anger, worry, fear and excitement. The more pleasant emotions are not so often seen in precedent history of the case. Overexertion, both mental and physical, are often cause of this condition and in consequence we are particularly apt to find the disease among business or professional men, who are subjected to stress of great responsibilities.

I wish to call your attention to one feature which always is emphasized in text-book descriptions. That is the mental state of patient, which usually is described as fear of impending death or dissolution. In my experience this has not been in any way a constant feature, for, in a large percentage of cases, it is not present at all. It is probably not a part of the symptom complex and is due to the fact that patient is apt to feel the serious import of any pain in region of heart, and consequently this gives rise to his mental attitude.

To relieve the pain morphin, or better, codein, is of valuable service. The nitrites are of universal use and may be given either in form of inhalation of amyl nitrite or hypodermic injections of nitroglycerin. A preparation which I have found more easily adapted to this condition is trinitrin. The patient is told to place one of these tablets in the mouth and to allow it to dissolve slowly. This is usually not accompanied by the distressing effects of the other forms of nitrites. Many of the attacks are brought about by gastric disturbances and in these instances a procedure which often causes great relief is as follows: With the patient's head thrown back he is told to swallow a small amount of water. This is followed by an eructation of gas and a general relief of cardiac symptoms. Charcoal preparations may also be of service in this condition to lessen gastric distention.

Life of patient should be so arranged to lessen probability of future paroxysms. This may mean giving up occupation or at least regulating or changing it so that stresses may be brought to minimum. A method which is of value in this regime is to have the patient take periods of rest, reclining if possible, once or twice a day. The diet should be light and easily digested, restricting mainly meats and conforming more to lactovegetarian type. Bowels should be freely opened and kept so. In medicinal treatment iodids form the basis and these are of doubtful value, except in those cases where there is a possible luetic origin. In the latter case, active antisyphilitic treatment should be instituted. Following some recent investigations, I have been using pancreas extract in some of these cases and, while it may or may not have any influence upon the condition, improve-

ment in patient's general health is often marked by a cessation of anginal attacks.

In handling these cases the physician must be very careful of his attitude toward the patient. Tact must be used in informing the individual as to exact condition and its possible consequences. While patient should be sufficiently acquainted with his state, for his own protection, morbid fears must not be inculcated, which may cause him additional distress and which may and have led even to suicide. Often it is found advisable to take up the details with some other interested party, rather than with patient himself.

DISCUSSION

Dr. Geo. S. Bond: I wish to commend Dr. Beifeld for devoting a large portion of this interesting paper to discussion of underlying causes of angina pectoris. While the general clinical picture is readily recognized by profession, as well as by laity, there is hardly any other portion of diseases of circulation where the fundamental principles are so generally misunderstood. This confusion is probably the outcome of adapting a clinical term to findings of anatomic or pathologic investigation. In the latter part of the eighteenth century the name was applied to a very concise description of symptom complex of the disease and only when sclerosis of coronary arteries was found in many of the cases was it naturally assigned as the cause. In more recent years, many cases have been observed clinically where this underlying anatomic basis was not present and, in consequence of this, they were given the name pseudoanginas, false anginas or anginoid. However, many of this group give just as true clinical pictures as in the cases due to coronary sclerosis, and as a result a general misunderstanding has arisen so that literature on the subject is marked by many widely different conceptions of the disease.

I am inclined to accept a view which has been gaining favor in the last few years, namely, that the symptoms of angina pectoris may be produced by any condition in the circulation which brings about a disproportion in amount of work placed upon heart and ability of cardiac muscle to perform same. This is immediate cause to which all others are contributing factors. Thus we can have anginal symptoms from a perfectly normal heart, due to excessive exertion, as is often seen in athletes, or in soldiers in battle. On the other hand, with lowerd muscular ability of the heart from any cause, ordinary activities of life may be sufficient to produce the symptoms. The causes which we usually describe may operate through one or both of these effects as, for example, in general arteriosclerosis, work of heart must be much greater to overcome peripheral resistance in circulation, and if coronary vessels are involved in the process, nutrition of heart muscle is impaired at the same time. This conception applies equally well to anginas of valvular lesions, pericarditis, aneurysm and the vasomotor group. The term pseudoangina should be assigned only to those cases of hysteria or gastric disturbances where precordial pain does not arise from circulatory mechanism but is referred to that region from other causes.

The speaker has so completely covered the subject of treatment that I wish to add only one other feature. The belief is common among physicians that nitrites relieve symptoms of attack by dilating coronary arteries and consequently increasing blood supply of the heart. Recent experimental work tends to show that this is not the case. The blood flow in coronary vessels is entirely dependent on general blood pressure, and under influence of nitrites this is much lower, with a consequent decrease in blood supply to the heart muscle. Therefore, relief of symptoms is obtained probably more through lowering of general blood pressure and lessened heart work, than through any change in coronary circulation.

It must be borne in mind that all anginas, whatever may be their cause, may be in some instances of serious import.

Thus, while the physician's duty is not to over alarm the patient in regard to his condition, this is one of the diseases in which he should never fail to protect himself from embarrassing results of a too optimistic prognosis.

Dr. J. A. McDonald: Perhaps no phase of the subject of heart disease has been so surrounded by mystery and uncertainty as the angina pectoris syndrome. For intelligent understanding of this pain symptom one must consider what is now accepted as its mode of production, which is a viscero-sensory reflex received by vagus or vagus autonomic transmitted to cervico-dorsal cord and referred as pain from spinal segments to the cervical or upper dorsal roots and distributed by peripheral nerves to chest-wall, upper or lower arm, to carotids and carotid sheaths, or by spinal accessory to the trapezius and sterno-cleido-mastoid muscles.

To this should be added, as best described by McKenzie, the visceromotor reflex, which is said to cause the frequently observed sense of chest constriction or compression, due to spasm of intercostal muscles analogous to board-like protective contraction of abdominal muscles, when underlying viscera are inflamed.

Essential causes for initiation of this pain-type are exhausted heart muscle and irritable spinal centers. Former may be due to transient ischemia from toxic or sympathetic coronary arteriospasm or coronary scoliosis or to inflammatory or degenerative conditions in heart muscle, or to conditions causing exhaustion of heart muscle, e. g., auricular fibrillation or paroxysmal tachycardia. The latter, i. e., excitable centers in the cord, may be due to some severe primary over-stimulation, and once so insulted, these centers remain always in a state of over-excitability.

Very unfortunately, the symptom line of this disease has become so tightly drawn that we are prone to overlook many cases that are essentially angina or, as I have come to term them, angina equivalents.

(1) Such are the cases of hypertension, with pain in carotids, and trapezii, with paresthesia of left arm and precordial hyperalgesia.

(2) Cases of rheumatic carditis with shoulder and precordial pain.

(3) The cases of dilated soft heart of viridans endocarditis which show practically every pain reflex of angina pectoris, but tempered to a tolerable degree or perhaps induced only by excitement or exertion.

In all of these, the mechanism of pain production is identical with that of true angina; many a nervous woman, with so-called pseudoangina, is in fact ill with chronic tonsillitis and endocarditis, as may readily be proved by temperature observation, blood cultures

and heart study, and yet these latter types are not instances of pseudoangina. The first group is probably true angina and should be studied with regard to aortic and carotid atheroma, which pre-suppose coronary atheroma, and tracings should be made in search especially for pulsus alternans so indicative of ventricular exhaustion, and the patient above all given care and treatment accorded true angina, but if there be present an infectious heart disease or a mediastinal growth, or a psychasthenia with lowered pain threshold, let us say so and omit the pseudoangina, simply recognizing the anginose mechanism of pain production.

Dr. Wynn: Too little is heard about angina pectoris. I believe it is increasing. With civilization comes syphilization, which has much to do with angina pectoris.

Cited cases showing it was not such a horrible death. There is often a period of rest preceding a final attack. It may arise from other causes than arteriosclerosis. Thrombosis may cause it.

Spirochetes may be found along small vessels of heart in abundance. Cited three cases of organic heart disease greatly improved with anti-syphilitic treatment. Digitalis was of no benefit. Cited case of nine years of attacks greatly improved by mercury.

Dr. Kimberlin: Authorities disagree. It does not occur in young, seldom in women, usually in men over 40. Eliminate organic heart disease. Psychic element is a great factor. Cited case of high blood pressure who had attacks walking to his office. He read literature and studied his case. Had attacks when his buzzer rang. He was put to rest and tobacco discontinued and improved. Tobacco is a more potent factor than alcohol. Cited case in which bread crust agitated throat. Died in such an attack.

Mental efforts tend to bring on attacks. Cited case where nose-bleed packed with adrenalin was made worse. Frequent among doctors.

Dr. Brayton emphasized syphilis as cause of angina pectoris.

Society extended vote of thanks to Dr. Beifeld.

Adjourned. Dr. Alfred Henry, Secretary.

Meeting March 23, 1915—Hotel Washington

Dr. A. W. Brayton read report of a resolution committee appointed by president relative to death of Dr. Potter.

Dr. F. C. Heath read a similar report on death of Dr. W. B. McDonald.

Paper of evening was by Dr. D. F. Lee on "Duties of the Medical Attendant in Intestinal Obstruction."

Abstract:

The complexity and enormity of the situation imposes on medical attendant one of the most formidable propositions with which he comes in contact. If all cases of obstruction were surgical cases, his duty would be simple enough, but since one-third of the cases met in general practice must be relieved by means other than by incision, and since complete syndrome of ileus and even the pathognomonic symptom, fecal vomiting, do not always justify section, his labor is the more difficult. He must by a careful analysis select the cases that belong to him and treat them successfully and he must do it promptly. It is an unpardonable error to use cathartics in any case, regardless of the cause.

Gastric lavage is directly opposite in its effect and is a highly conservative measure. Many cases of obstruction by obturation may be relieved by administration of morphia, for relief of excessive peristalis or enterospasm. In cases where the evidence will justify temporizing methods I am convinced that we may with safety use stomach washing and liquid albolene by mouth. Liquid albolene does not increase or excite peristalsis, but permeates and lubricates and often may break down an obstruction, that is not mechanical. After the case is decided to be one of mechanical obstruction any means to try to induce a motion is unscientific and unwarranted. In cases where there are contra-indications to operation, we are justified in treating patient on expectant and supportive plan.

DISCUSSION

Dr. Reed: Agreed with essayist on treatment if he would include cases of obturation. In paralytic ileus there really is no obstruction. The dynamic type is rare. Removal of morphin may cause it. Type of obstruction determines course of surgeon or internist. Stercoraceous vomiting is not pathognomonic of obstruction. Many cases of obstruction of large bowel do not have this vomiting.

Cited cases to substantiate statement; in cases of obstruction enemas and albolene seem to be proper treatment. Afraid of morphin; may preclude possibility of diagnosis and it may increase the mass.

Paper, Dr. S. E. Earp.

The medical attendant should make a very careful analysis of patient's symptoms and if there is sufficient evidence for a provisional diagnosis of obstruction of bowel, it is then wise to hold a conference with a surgeon. In the treatment there were mentioned liquid paraffin, morphia, atropia, gastric lavage, Leiter's coil and salicylate of eserin, the latter in doses of 1/60 grain. However, eserin is a cardiac depressant and with it there should be used strophanthin, digitalis or spartein.

It is interesting to note the stand that recently has been taken concerning toxemia in intestinal obstruction. Various theories account for characteristic symptoms and often rapid death, following intestinal obstruction. A contribution by Hartwell, Hoquet and Beekman, makes the point that if we accept view that death results from toxemia then either new poisons are elaborated and absorbed, or an abnormal absorption of normal present products takes place.

Whipple, Stone and Bernheim, though unable to isolate any poisonous material from normal intestine, have obtained toxic products from closed or obstructive loops of bowel. They believe that the harmful substance is elaborated in mucosa and that some unknown agency alters epithelium under condition of obstruction.

Hartwell thinks that the alleged toxic substances are derived from damage to intestinal wall, that cause of death does not result from the poisons per se, but in production of lesions which favor their absorption. We must bear in mind stagnated enzymes above the obstruction is a cause in part, if damage has resulted to intestinal mucosa. The loss of water we find in intestinal obstruction is caused by excessive drainage into the intestinal lumen followed by vomiting. Hartwell and colleagues have shown that this factor is under therapeutic control and can be ren-

dered harmless by subcutaneous administration of physiologic saline solution; for instance, continuous hypodermoclysis.

Dr. Earp: The replacement of lost water is fruitful only so long as intestinal mucosa remains in contact.

Obstruction of lower bowel is less productive of dehydration because there is long surface; reabsorption can take place and vomitus thereby reduced in amount. This shows why high obstruction is more acute than low obstruction. Mechanical condition renders the damaged factors prominent.

Meeting adjourned with an attendance of sixty-five members. Dr. Alfred Henry, Secretary.

Meeting March 30, 1915—City Hospital

Drs. Paul Thomas Hurt and Arthur Louis Walters were elected to membership.

Program:

Dr. Fletcher Hodges presented the following case:

(A) Delivery under hyoscin-morphin anesthesia. Polyhydramnios, footling, fetal syphilis.

(B) Puerperium, acute mastitis in syphilitic; surgical drainage; neosalvarsan, "mixed treatment," recovery.

Case.—M. E., colored, aged 17, multipara, 100 pounds, admits Neisserian infection; lues suspected. History of rachitis. Pelvis slightly flat, with sharp pubic arch.

Living birth: footling, male 6 lbs. Fetus syphilitic and apparently macerated, vernix caseosa practically wanting, and in several areas skin is desquamated, leaving lower layers of epithelium denuded, red and boggy. Remaining skin in undenuded portions can be peeled off readily. Medium asphyxia, probably due to anesthesia, responds to artificial respiration, child finally breathing and crying. Membranes ruptured artificially by assisting intern. Polyhydramnios; liquor amnii of dirty greenish tint, and contains shreds of meconium; odor musty, but not offensive. Placenta syphilitic. Mother and child isolated. Child given treatment for premature infants, and mild anti-syphilitic treatment employed. Even nursed few times. Grew weaker; refused nourishment through medicine dropper; died in coma, two days after birth.

Mother's breast: Four days after birth, nipple sore, erosion at base, exuding offensive, serous discharge. Small ulcers about Montgomery's glands coalesce and form crusts. Several deep-seated, tender tumors, palpated in parenchyma of mamma, not relieved by breast pump and brisk catharsis. On deep pressure, milk mixed with pus exudes from nipple. Chills and fever, pain and tenderness in affected organ.

Operation: Through and through incisions, after Richardson's method to avoid subsequent pigmentation of cicatrices. Some pus and milk exude through incisions. Silk worm gut drainage. Tumors palpated before operation, on incision found to be hard, grit under knife and resembled diffuse gummata.

Course: Proper drainage maintained and alcohol dressing applied. Gradual improvement under three injections of neosalvarsan and "mixed treatment." Patient suddenly left hospital.

Dr. O. N. Torian presented three cases of babies with enlarged spleen. Mentioned various infections causing such. By elimination syphilis was determined as cause of two cases. Spleen enlargement is very common in syphilis of children. Cases had enlarged livers. Excoriations around nose marked. Mercurial ointment had greatly improved this; it was not proved, however, they were not tuberculous, Dr. Torian said.

Case 3.—Hard swelling of neck under right ear, which was discharging. Facial paralysis on right side followed gland enlargement. Anemic blood showed 8,600 white cells, 50 per cent. hemoglobin. No leukemia shown by blood, picture in keeping with Hodgkin's disease, tuberculosis and syphilis. No history of tuberculosis. Cough, dulness at right of sternum. Enlarged liver. Abdominal glands enlarged and nodules in right iliac region. Temperature, 99.2 down to 98. Swelling and enlarged glands are in keeping with tuberculosis and Hodgkin's disease. However, Hodgkin's disease is rare in babies. Von Pirquet negative in twenty-four hours. No diagnosis made.

Dr. Will Moore, hospital intern, talked on treatment of fifty drug habitues. Following methods were mentioned:

1. Reduction method easy and efficient.
2. Sodium and ammonium bromid in massive doses.
3. Prescription.

Scopolamin hydrobromid	Gr. 8/100
Pilocarpin hydrochlorid	Gr. 2/3
Dionin	Gr. 4
Fluidextract cascara sagrada	Dr. 2
Alcohol	Dr. 4
Water Q. S.	Oz. 1

Sig. minims 30 each three hours for six days.
7th day minims 15, every three hours.
8th " " 5, " " "
9th " " 5, t. i. d. until cured.
Dorsey's ounces 2— to keep bowels open.
Tr. digitalis minims 10, t. i. d.
Spartein, gr. 1, t. i. d.

Dr. T. B. Noble presented a specimen of spindle cell sarcoma, weighing 25 pounds. Patient, aged 65, harnessmaker, weight 180. Abdominal distension and distress. Negative family history. Present condition began one year ago. Cardiac hypertrophy with mitral regurgitation. No edema present. Abdomen flat on percussion. Slightly enlarged veins. Tumor mass easily palpable, extending from pubes to costal margin. Operated four days ago. Recovering. Coley's serum will be administered.

Dr. S. E. Earp presented a colored woman, aged 103, with edematous vocal cords.

Refreshments were served. Attendance, 105.

Dr. Alfred Henry, Secretary.

INDIANA UNIVERSITY SCHOOL OF MEDICINE

General Seminar, Feb. 26, 1915

The general seminar of the faculty met on Friday evening, February 26, with one of the most interesting programs of the year. In these seminars, papers and cases are presented by upper class students and members of the faculty, followed by discussions by those present. The work done by the students of the university is new and most gratifying to the faculty because of the subjects undertaken and the cases which they have so thoroughly studied and presented.

Mr. Kent gave the histories and pathologic findings in three cases: (1) cancer of the lachrymal gland; (2) colloidal cancer of the breast; (3) cancer of the lip. In case two Mr. Kent made the points that these cancers are rare; relatively benign, and that removal gives good results. Mr. Kent's paper was supplemented with lantern slides and specimens of the removed tissues.

Dr. Jane Ketcham and Dr. Joseph Berry presented a case of splenomyelogenous leukemia which had been treated with benzol. The patient was a female, aged 29, foreigner, history negative. First noticed tumor masses in the neck with absence of adenitis. The ankles were swollen slightly, and there was a slight systolic murmur at the second interspace. The spleen was resting on the crest of the ilium. Patient was admitted to the Robert W. Long Hospital July 29, 1914 with Wassermann and blood cultures negative. Benzol treatment was instituted at once, the first doses being given in an emulsion of olive oil. Later the pure drug was given. The following is the clinical record of the case:

July 28	White	31,400
	Hemoglobin	51 per cent.
Sept. 3	White	450,000
	Red	2,500,000
	Hemoglobin	53 per cent.
Oct. 7	White	*T50,000
	Red	3,600,000
	Hemoglobin	59 per cent.
Oct. 28	White	†31,000
	Red	5,800,000
Dec. 18	White	2,300
	Red	4,000,000
Jan. 11	White	7,800
	Red	5,600,000
Feb. 25	White	8,000
	Red	4,000,000
	Hemoglobin	69 per cent.

*Maximum dose benzol M 35 t. i. d.
†Benzol stopped.

Dr. Berry then presented the literature on benzol treatment, with the following conclusions from von Korany's clinic: (1) Benzol first tends to increase the white blood cells, but shortly leads to improvement in the leukemic condition. The fall in the white count usually begins at the end of the second week or the beginning of the third week of therapy, the decrease at first being slow and then very rapid. The general condition of the patient is improved just as with Roentgen-ray and other forms of treatment.

(2) Benzol acts more slowly than Roentgen-ray, but the patients improve under its administration who do not respond to the usual therapy. Previous or concomitant application of the Roentgen-ray seems to hasten the action of the drug.

(3) The drug can safely be given in doses of 4 gm. daily, and its administration with equal parts of olive oil seems to lessen the tendency to produce unpleasant symptoms, such as heartburn, eructations and vertigo.

Dr. Wynn discussed Roentgen-ray treatment in fifteen cases. He stated that there were benefits and even clinical cures in these cases, but that it became noticeable that many of them died later from sudden illnesses.

Dr. Emerson presented a case of spondylitis deformans with complete immobilization from ossification of the cartilages and ligaments from the neck to the knees. In this case streptococci were found in the blood, and the condition seems to have followed an acute attack of la grippe. Such cases are rare with the laboratory findings in this case. The treatment, Dr. Emerson states, will probably be along the lines of autogenous vaccine, and if the patient is benefited a series of osteoplastic operations may be attempted to restore motion.

The talk of Dr. E. H. Lindley was a continuation of the last lecture on the mechanism of suggestion. He stated that suggestions were noticed to have played an important part in certain conditions many years ago, and it was found that novel and mysterious ideas and suggestions made material and sometimes lasting impressions on the mental attitude, *especially when these suggestions were desired by the patient.* It was upon this basis that Freud built his theory of psychanalysis. It has been noted that new elements of suggestion enrich and sometimes completely alter psychologic systems in patients, and in those cases where an attempt is made by the individual to resist certain suggestions, there is a mental trauma, from which, in itself, is sometimes evolved a new suggestion which in turn alters the original system. Freud, having recognized the great possibilities in such a condition began, by psychanalysis, to urge the patient to recall the traumatic incident and then give vent to a complete expression of the whole mind. The reason why these mental traumata obtain is because the individual tries to "forget it," instead of giving vent at the time—the mind, revolting at such experiences, refuses to entertain them. They still remain, however, buried but not dead and tinge the whole mental attitude with abnormal conditions.

On the subject of hysteria, Dr. Lindley stated that "hysteria is mental, not psychologic (Janet) because the mind fails to entertain the new situations, which may have arisen, and to synthesize them into a rational balance. These small offsprings or peripheral incidents in the individual's mental experience sometimes grow up to contest the supremacy with the normal psychic balance and the patient becomes split up into multiple manifestations and even personalities.

Dreams are the expressions of repressed wishes, and if we turn to the dream life we may be able to make a deeper study of the patient and his subconscious or repressed desires. Then the treatment would be directed to the recalling of the repressed wishes or experiences or traumata and provide an outlet, or full expression of this emotion. After this, the overcoming of the bad habit, followed by re-education often secured brilliant results. These traumata usually occurred in the sexual experiences of child life. Dr. Lindley likened these suppressed emotions to water tight compartments in the consciousness which must be kept organized and under control or they will break loose and overrun the individual.

General Seminar, March 23, 1915

The regular monthly seminar of the medical faculty was held Friday evening, March 23. Three surgical cases from the University Hospital were presented by Dr. Moore: An epithelioma baso-cellular treated

by excision, a fibro-spindle celled sarcoma of the mesentery of small bowel treated by excision of the mass with 52 inches of bowel with good recovery, and an intussusception of the ileum at the cecal junction in a child six months old followed by death.

Dr. Moore of the City Hospital intern staff, reported sixteen cases of drug addiction, treated at that institution. Various methods were used but the highest recommendation was given the Lambert method.

Mr. Day of the senior class presented a specimen from the experimental surgical laboratory demonstrating technic of partial gastrectomy.

Dr. Bohn of the department of medicine, continued his talk on the electro-cardiograph, taking up its clinical application.

Interesting discussions followed each number.

These seminars are proving very popular with the faculty, their original features creating an atmosphere very refreshing to those in attendance.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of March 12, 1915

Regular meeting of Muncie Academy of Medicine was held in the Y. M. C. A. building Friday evening, March 12, and was called to order at 8:30 by President O. E. Spurgeon, M.D.

A quiz on "Secondary Pathology of Nephritis," was conducted by Dr. W. J. Molloy.

Dr. W. W. Wadsworth read a paper on "Nephritis, a Secondary Rather Than a Primary Disease," saying in part: Nephritis is a secondary rather than a primary manifestation. It has been classified by its symptomatology, duration, morbid anatomy, pathologic findings and secondary changes. Etiology and pathology obscured by overlapping and entwining symptom groupings. The etiologic factors are numerous as the violations of physiologic laws. Albuminuria, so long regarded a product of nephritis, may be due to physiologic as well as pathologic changes. Acute nephritis, of which we have some definite knowledge, is most frequently found as a sequela of acute infection. Even here it is secondary, frequently following convalescence several weeks. Its toxic origin is now fairly well established, with streptococcus at head of etiologic class. Causative factors in chronic nephritis are speculative. Most interesting and fruitful field of present investigation is role of focal infection. The teeth, tonsils, nasopharynx, accessory sinuses, chronic appendicitis or latent infection of pelvic viscera, may give rise to systemic infection accompanied by chronic nephritis. In endocarditis, myositis or arthritis, etc., examination for focal or latent antecedent toxemia is important. Characteristic signs of chronic nephritis with history of luetic or gonorrheal infection, with any cardio-renal degeneration with specific history at once suggest a Wassermann test. In nephritis without history of infection we turn to the ever present and potent factor of metabolism. Carefully checking cause and effect we find gastronomic sins have their sequence in deranged functionings of nervous and vascular systems. Other forms of dissipation in a strenuous indoor life with insufficient exercise in open air call for correction. Real problem in treatment is maintained parity between nutrition and elimination. Much of our treatment is empirical, as in the abuse of diuretics. In dealing with organic function we must not ignore biologic law, to wit: "Organs act and react according to stimuli," and its corollary that, "each cell of an organism is interdependent on every other cell for health and normal functioning." To treat nephritis as primary, like a defective part in a machine, is an attempt to translate biologic into mechanical laws.

The paper was discussed by Drs. Spurgeon, L. L. and C. A. Ball, F. E. Hill and others, and brought out this interesting fact, that while the average age at which humanity ends its days has advanced in the last third of a century from thirty-five years to fifty years, the individual expectancy has actually decreased. The advance in the average being due entirely to the lowered mortality rate in infancy. The man of 40 now has less chance to reach the allotted "three score and ten" than he had thirty years ago.

Adjourned.

Meeting of March 19, 1915

Dr. D. M. Green read a paper on "Intoxication," saying as follows: Intoxications may be classed under four great heads, drugs, food, pellagra and autointoxication; but I wish to consider, at this time, only the second and fourth, which comprise bulk of intoxications. Although differing widely in many respects, touch and overlap in others. Health, growth and repair depend on five chief requisites, (a) proper ingestion of necessary quantities of suitable food, (b) satisfactory assimilation of same, (c) proper elimination of natural waste products, (d) proper exercise, and (e) sufficient rest. Any departure from any of the above is the signal for bodily embarrassment, ranging in degree from minor discomfort to disease of the utmost seriousness. Nature has endowed the individual with power to rapidly recover from the effects of occasional interruptions, and only when they become frequent or of intense degree does she show a decided resentment. Healthy conduct of digestion depends on proper food, secretion of digestive ferments and evacuation of the bowels. Inadequate elimination is a most important cause of intoxication. The normal process of digestion gives rise to toxic substances which under normal conditions are eliminated before they do serious damage. The alimentary tract is normally inhabited by myriads of bacteria, some of which are non-pathogenic, and some like the colon bacillus are beneficial, but intestinal stasis permits their increase to the extent that pathologic changes occur. Protein, carbohydrate and fat metabolism each gives off peculiar products, some of which are transition forms of assimilable foods; others are by-products or waste materials. Diarrhea is nature's method of correcting imbalance by throwing off good, bad and indifferent materials all together. Reverse conditions are responsible for a wide range of systemic disorders. Personal idiosynerasy is the occasional cause of severe food poisoning. There is no doubt but that many of us eat more than we need, yes more than can be properly acted upon, and therefore becomes the prey of putrefactive processes. Prophylaxis is obvious. Patients should be taught regularity and discipline of habits and

method in the details of food selection. With the body in a physiologic condition, the organs of defense are ordinarily capable of protecting against auto-intoxication. Intestinal stasis is a pathologic condition. Proper diet plus elimination plus Metchnikoff's method of replacing harmful bacteria with healthful, such as the *Bacillus bulgaricus,* equals relief from auto-intoxication.

Adjourned.

Meeting of March 26, 1915

A paper on "Treatment of Intestinal Auto-Intoxication" was read by Dr. C. Melvin Mix, who said: By intestinal auto-intoxication we mean toxic effects produced by action of bacteria on ingested food. Factors producing this state are (1) conditions in tract itself favoring a prolonged sojourn of the food; (2) kind and quality of food ingested; (3) the flora of the intestines. Treatment is dietetic, medical, surgical and bacteriologic. Treatment of auto-intoxication is really the treatment of constipation, and requires a careful diagnosis. Mechanics of tract should first be determined. By giving bismuth meal and bismuth enema and using fluoroscope, kinks or obstructions can be discovered and time required for meal to reach rectum can be determined. When we have learned that food passes without obstruction in a normal length of time from mouth to anus we safely conclude surgery is not indicated. In this connection interesting queries arise: (1) How soon should a meal reach the cecum? (2) How long does the material remain in colon? (3) How soon after taking of food does the pylorus open? (4) Is regurgitation at ileocecal valve normal? (5) Where does absorption of most harmful bacteria occur, in small or large intestines? If we find stasis a factor we may have either organic lesions, as ulcers, cancers and adhesions or we may have general visceroptosis. Intestinal surgery is a constantly enlarging field that is full of promise. Binding or strapping of abdomen, properly done, are of value in visceroptosis. Rest in bed with head low, with massage and exercise while in this position is beneficial. Liquid paraffin is valuable in keeping intestinal contents moving. Diet is important. Food known to produce symptoms should be avoided. Buttermilk is of value. Many people eat too much. Of intestinal antiseptics, I get the best results with salol and thymol. A reliable preparation of the *Bacillus bulgaricus* is of great value.

Adjourned. H. D. Fair, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of Feb. 2, 1915

Society met in regular session in the assembly room of the court house with twenty-four members present. Minutes of two preceding meetings read and approved as read.

CLINICAL CASES

Dr. A. E. Bulson reported two cases of pulmonary tuberculosis in which the sputum contained numerous tubercle bacilli. Specimens from these patients had been sent to the State Board of Health Laboratory and negative findings returned. It would seem that the State Board of Health Laboratory is either lax in its methods of examination of specimens of this nature or is placing this work in incompetent hands.

Dr. Rhamy: I want to make one criticism of the State Board of Health Laboratory; they try to do too much work. They should confine their work to public health matters and cut out the special examinations of tumors, stomach contents, etc.

Dr. Bulson: There has been a movement by some of the county boards of health to furnish laboratory examinations including Wassermann tests free to all. I am opposed to this. It pauperizes the community and the work will be done by incompetent men.

Dr. M. F. Porter reported the following cases:

Case 1.—This patient was referred to me by the company she was suing with the request that I examine her and render an opinion as to the nature of her trouble and its cause and extent.

Age 20, married nine months, sterile, no previous illness. Menstrual history unimportant. Family history negative.

History of Present Trouble.—Patient boarded train in perfect health on July 10, 1914. Sudden starting of the car caused her to fall. In falling she struck her left side about the waist line, falling on the suitcase she was carrying. The fall did not render her unconscious. She was helped to her seat and completed her journey. Did not take to her bed until a week after the injury, at which time she went to bed and remained there three and one-half weeks, complaining of pain in left side, together with frequent and painful urination. She had a number of chills and some fever. Three days after going to bed she commenced complaining also of pain in right side about the same location as that in left. This pain she locates in iliac region extending up to lower outer aspect of lumbar regions. Her present complaint is of pain in the localities given above, frequent and painful urination. Thinks she has been losing weight. She never weighed over 120 pounds. Since she was hurt she has weighed as little as 82. Complains of pain and distress in lower abdomen and back on walking. Says she has had headache ever since she was hurt and never had it before. Complains of her feet feeling numb and legs cramping up to her hips at times. These symptoms also have come on since her injury.

Examination.—Height 5 feet, 3⅜ inches, weight 97 pounds, medium complexion. A slight cough is noticed which she says has only troubled her for two days. Examination of her chest negative. Abdomen is tender all over, but especially across the lower third. Tenderness on pressure over both kidneys behind. Bimanual examination of pelvis shows a small illy defined mass in the left broad ligament, increased resistance in the right with tenderness over the whole vaginal vault. The womb is not fixed but is not freely movable. Urinary and blood examinations negative.

Opinion.—On the basis of the above findings I conclude that the patient is suffering from a salpingitis duplex probably complicated with an infection of the urinary tract, although the latter fact is not definitely established. The injury has no casual relation to the present trouble. The disability is not permanent, the chances for recovery being very good.

Case 2.—Miss H. B., aged 28, came to me complaining of nervousness, inability to work on account of tiring easily and an enlargement of her neck. She has never been seriously ill but has always been nervous. Her menses came when she was 14 years old. Periods were very irregular until within the last two years, since which time they have been quite regular but painful.

Family History.—Mother had goiter and died of heart trouble and paralysis. Two sisters have been operated on for goiter. Two grandparents died of consumption and one maternal aunt died of cancer.

Present Complaint.—Unable to work because she becomes exhausted. Has pain in the back and base of the neck. Gets out of breath easily. She says that frequently when she was a school girl it would be necessary for her to stop school for a few days in order to recuperate from feeling of exhaustion and nervousness, when after a few days she would be able to go back and resume her work for a time. Some tendency to diarrhea. Appetite good. Sleeps poorly at times.

Examination.—Height 5 feet, 2½ inches, weight 122½ pounds, gray eyes, dark hair and skin. Skin has a pasty look. Face looks rather puffy. No particular hardness and no edema. Heart is normal, pulse 64. Bimanual examination of pelvis extremely unsatisfactory on account of extremely painful vaginismus. A smooth elastic goiter involving the right lobe about the size of a small flattened tangerine orange. Blood pressure 118. Urine and blood negative. On attempting to get up from the examining table the patient complained of feeling faint. I had her lie down immediately, found that the heart beats were regular, strong and apparently normal in every way, except that the heart was only beating now 54 times per minute, whereas earlier in the examination the pulse was counted at 64. Believing that this woman was suffering from thyroid intoxication and holding as I do that so-called simple goiters will sooner or later become toxic and should, therefore, be removed, I advised the patient to have the right lobe of the thyroid removed. This was done in the usual way. Patient left the hospital on the sixth day after the operation, there having been nothing unusual to note in her convalescence except that her pulse rate was much more nearly normal when she left than when she entered the hospital. At no time was she found with a pulse below 74, whereas prior to the operation it had been as low as 54. I shall watch with a great deal of interest the outcome of this case. It is, of course, too soon after the operation to form an opinion now as to its advisability or otherwise.

DISCUSSION OF CASE 1

Dr. Weaver: I think that the complement fixation test for gonorrhea done on the blood of this case would be of great diagnostic value. The accident may have had little bearing on the case.

Dr. Duemling: I believe with Dr. Weaver that the accident in this case is merely an incident in this woman's illness. I think this woman has a specific salpingitis and parametritis. We all have seen such a blood picture in acute pyosalpinx. These cases we have demonstrated on the operating table.

Dr. B. Van Sweringen: General abdominal tenderness, loss of weight, normal blood in the presence of a mass in the pelvis looks like a tubercular peritonitis. A newly married woman whose husband has suffered an epididymitis would lead one to suspicion specific infection of the tubes in this case. The fact that this woman was not disabled until a week after the injury, and that the injury was not of sufficient violence to cause the present trouble would make one suspicious of some previous infection of the tube producing the present condition.

Dr. Porter (closing): I think the most important point in this case is the fact that the patient did not take to her bed until a week and a half after the injury and then the present condition developed.

DISCUSSION OF CASE 2

Dr. B. Van Sweringen: There are some symptoms present in this case which seem to indicate myxedema. It seems almost impossible to have hyperthyroidism in the presence of myxedema, yet cases do occur in which some change in the secretion of the gland could produce hyperthyroidism.

Dr. Hamilton: I think it would be interesting to watch the symptoms of this case (diarrhea, etc.) for some time. I do not believe there will be any change in the symptoms. My belief is that they all will return.

Dr. Porter: This woman has no symptoms of hypothyroidism except that she is rather fat than poor. Her features are coarse and there is some bradycardia, but this later symptom is not marked. The diarrhea may be present in both conditions. Rogers takes the stand that all goiters are pathologic.

Dr. H. A. Duemling reported the following cases:

Case 1.—Male, 21 years of age; clerk by occupation; unmarried; family history negative; previous history negative; present history: His health was always good, never noticed any trouble of any kind. For the past month has had a sense of hunger one or two hours after eating. While at work in the office January 18 was taken with a severe, excruciating pain in the epigastrium. Walked home three blocks when pain became so severe he could hardly breathe. Came into the hospital at 5 o'clock with a pulse of 90; temperature 99; greatly distended abdomen; extremely sensitive over entire surface. Two hours after admission, pulse 124; temperature 100.3; blood-whites 18,600; polynuclears 90 per cent.; small lymphocytes 9 per cent.; large lymphocytes 1 per cent.; urine negative. On operation, exploratory incision was made over appendix, which was found to be negative. Incision in the epigastric region revealed a perforated ulcer on the anterior stomach surface near the pylorus. The perforation was closed with (purse string) suture. A tube was introduced into the pelvis for drainage. Patient is making an uneventful recovery.

Case 2.—Male 53 years of age; occupation, clerk; family history, negative; personal history; this patient upon the day of the probable perforation of his gastric ulcer had been subjected to a bismuth meal for the purpose of x-ray examination of the abdomen, and was on his way home from the hospital at the time of the onset of his trouble. Present

illness: twenty years ago had attacks of so-called stomach trouble lasting for five or six weeks; recurrent attacks at intervals of three to six months for the past five years, gradually growing more frequent and severe. For the past two years has had attacks of vomiting; food taken hours before these attacks has been detected in the vomitus; never any blood until two weeks ago, at which time the blood was a very bright red. No recurrence of vomiting of blood. Test meal on the 20th of January showed normal acidity, no lactic acid and a trace of blood. X-ray showed dilatation and ptosis of the stomach. On the 21st was taken with a severe pain in the epigastrium which was not relieved with morphin. On admission into the hospital he had a pulse of 140 and a temperature of 99. Extreme abdominal rigidity and severe pain in abdomen. Blood examination showed 18,000 leukocytes; 90 per cent. polynuclears; small lymphocytes 7 per cent.; large lymphocytes 3 per cent. It was impossible to obtain a specimen of urine prior to operation. Laparotomy revealed a perforated ulcer, chronic in type, with a general peritonitis. Posterior gastro-enterostomy was done. First specimen of urine obtained after operation showed: albumin + +, blood, pus, hyaline and granular casts. Patient succumbed to nephritis seven days following operation.

Case 3.—Male 49 years of age; single; occupation, farmer; family history, negative; personal history, negative. While at work fell from a load of corn fodder, lighting upon a sharp stub of corn stalk which penetrated the peritoneum anterior to the rectum, extending through and perforating the summit of the bladder. Laparotomy was done; bladder rupture closed and two tubes and two iodoform drains introduced. Patient did very well for four days when he began vomiting. This vomiting continued until it became fecal in character. Attempts at bowel movement were unsuccessful. On withdrawing the gauze drains vomiting ceased and the patient to-day has had several copious bowel movements. His obstruction was relieved by the removal of the drain.

DISCUSSION

Dr. Porter: In the first case the history is that of a case of acute perforating ulcer of the stomach. The question now under discussion in this case is whether it is best to close the opening and do a posterio-enterostomy or to simply close the opening. In the second case the interesting point is just how much of the bismuth meal had to do with the production of the perforation in this case. I believe this stomach was adherent to the liver and it became torn away from these adhesions at the time of the onset of his symptoms of perforation, or perforation being present beforehand. I believe that the history in any case is very important and should not be discounted unless found untrue, but any fact, no matter how trivial in a history, should be worthy of investigation.

Dr. Catlett: I saw a patient in the Cincinnati Hospital with the same history as the rupture of the bladder case reported by Dr. Duemling, in which the treatment instituted was almost identical. The patient died within a few days following the injury.

Dr. Weaver: I think that Dr. Duemling's opinion of the way in which this condition in Case 2 was produced is correct. Granting that this case was screened following the bismuth meal, I can see how the manipulation might produce the separation of adhesions in a condition of this kind. The relation between the production of ulcer and the nephritis is interesting.

Dr. McEvoy: I have had the misfortune to see two cases of ruptured duodenal ulcer. In both of these cases the pain was the most severe of any I have ever witnessed in any condition of intra-abdominal pathology. Both of these cases were operated on and both of them died.

Dr. Porter: I believe that we are loosing a number of cases of acute abdominal lesions which are waiting to be diagnosed. The differential diagnosis between lesions of this type is difficult to make. It is immaterial what the lesion is, it can be diagnosed when the adbomen is opened. All that is necessary to decide is that an intra-abdominal catastrophe has occurred and necessitates surgical intervention.

Dr. Duemling (closing): In a recent article in a German publication, I saw an opinion regarding the benefit of gastro-enterostomy in these cases. This method of treatment is decried. In a case where a man was stabbed with a very thin stiletto in the abdomen during a drunken brawl and a puncture wound was produced in the intestine, the wound was closed by Dr. Porter and an uneventful recovery took place. I believe that many women are alive to-day because of a properly placed gauze drain. When once you are convinced that a patient has a surgical condition within the abdomen, one is wasting time attempting to diagnose the exact nature of the lesion.

Adjourned.

Meeting of Feb. 9, 1915

Society met in regular session in the assembly room of the court house with nineteen members present. Meeting called to order by the president. Minutes of preceding meeting read and approved as read.

CLINICAL CASES

Dr. H. E. Glock presented a patient with the following history: S. S., male, 17 years of age; no occupation; family history, negative; an only child. Present illness: Has had headache (frontal) for the last eighteen months, at which time he was overcome by heat. For the last month has complained of failing vision in the right eye, which is now nearly blind; has grown excessively fat in the last three years; very poorly developed sexually; no pubic or axillary hair. There has been no change in this condition for the last three years except that he has grown a little in height, which is 5 feet, 3 inches. Hands and feet are small as are the arms and legs compared to normal development. Gets up several times at night; can sleep most any time during the day and his usual rest at night is about ten hours. Dr. King, who referred the patient to me, reports the finding of acetone in the urine; the test meal showed stomach to be normal, although he has vomited several times for a week at a time; his present weight is 150 pounds; his reflexes are normal; grip in each hand is very weak. Tension of eyeballs good; convergence poor; pupils normal; disk of right eye slightly pale and veins very slightly tortuous; disk of left eye normal; vision of right eye — sees fingers at 10 inches; vision of the left eye 6/12 D; temporal half of the field of

vision of the left eye is blotted out. X-ray of cranium shows a distinct tumor outline in pituitary region. Diagnosis: hypophysial tumor producing the type dystrophia adiposogenitalis.

DISCUSSION

Dr. M. F. Porter: A decompression operation would not cure the malady but would stop his rapidly on-coming blindness. A removal of the tumor would in all probability cure the disease. The best avenue of approach to this tumor can best be discussed at another time.

Dr. Wheelock: A decompression operation would relieve his blindness. I recall a case eighteen or twenty years ago of a male who had a certain amount of giantism. I found a tumor of the hypophysis on post mortem examination.

Dr. M. F. Porter, Jr.: This is a perfectly plain case of hyperpituitarism. Whether this is a homoplastic or a heteroplastic growth makes little difference as far as this case is concerned. The marked hypotrichosis, the adiposity and the eye signs in a boy 17 years of age make this an unmistakable pituitary disease.

Dr. Weaver: In this skiagram you can see the impingement on the sphenoidal sinus by the growth.

Dr. Glock (closing): One thing I did not mention is while this boy looks strong, he is not. His grip is not as good as that a boy his age should have. When he came to me he said he had lost the sight of the right eye, and he counted fingers at the distance of 10 inches; now, I have to get pretty close for him to count them. This rather rapid loss of sight is due undoubtedly to pressure on the optic nerve.

Dr. Wheelock reported the following case: Female 15 years of age came to me complaining of being unable to breathe. Her physical condition is good. At 12 years of age she had a growth removed from her nose; two years later she had it removed again. On examination I found a large growth posterior to the uvula. This growth I removed. On examination it proved to be a myxoma with more or less inflammatory reaction present. Dr. Wheelock exhibited the specimen.

Dr. H. V. Blosser: What is the possibility of the growth recurring?

Dr. Wheelock: I think the growth will recur. I think it springs from the middle turbinate bone, and if it recurs I shall remove the middle turbinate at the same time that I remove the growth.

Paper of the evening: "Shall We Immunize in Diphtheria?" by Dr. J. H. Gilpin.

DISCUSSION

Dr. Weaver: This is a subject in which we are all interested. I was struck with the relatively low number of adults that are immune to this disease. You also can determine by means of the Schick test when it is necessary to cease to immunize your patient, which is an important point in the avoidance of anaphylaxis. Not every individual requires the usual dose of antitoxin to develop anaphylaxis.

Dr. Hamilton: I am surprised that the American boards of health are so much in favor of immunizing in diphtheria. In Germany and Austria they are experimenting with all kinds of domestic animals for the purpose of producing antitoxin so that different kinds of serum can be used when the necessity arises to give another dose of antitoxin for the cure of the disease.

Dr. Morgan: I have used antitoxin as an immunizing agent and had it fail utterly in four cases.

Dr. B. W. Rhamy: I do not think the dangers of anaphylaxis are exaggerated, because we know that the danger exists. The question is not one of exaggeration but of relative frequency of cases of anaphylaxis. About one individual in 20,000 injected with foreign serum shows symptoms of anaphylaxis after the first injection, and about one in 50,000 die from it. Theoretically, anaphylactic sensitization occurs in every individual injected with a foreign protein. The height of hypersensitiveness is reached in from six to twelve days or longer, depending on the amount of protein injected. If after this period has elapsed a second injection is given, serious symptoms of anaphylaxis may develop, and for this reason, no matter what the relative frequency of anaphylaxis, boards of health should not decry this danger. Now, if the second injection is given during the incubation stage, say five or six days after the first injection, sensitization will not occur and no anaphylactic symptoms will develop. That is to say, the patient is then rendered immune to anaphylaxis from this particular protein and remains immune thereafter. If by the Schick test it can be told that an individual is susceptible to diphtheria infection within twenty-four hours, then it seems to me advisable that this test should be used on the children in the house containing a case of diphtheria rather than indiscriminate immunization. If one or two of the children show susceptibility to diphtheria, they then can be given an immunizing dose of antitoxin and a second Schick's test will show whether or not this dose produces the desired effect, so that if a second immunizing dose is necessary it can be given within the anaphylactic incubation period and thus not only avoid anaphylaxis but render the individual immune to subsequent possible injection.

Dr. Porter: I am opposed to immunization against diphtheria for the reason that it does not immunize against the second attack of the disease. I know from clinical experience that one attack of diphtheria does not immunize against the second.

Dr. Hamilton: I was under the impression that the susceptibility to the production of anaphylaxis lasted throughout the patient's lifetime following the injection of an alien serum.

Dr. Dancer: I cannot see any use in immunizing against diphtheria if it only lasts fourteen days. (Dr. Dancer then read a report from the Chicago Board of Health on the Schick test). If there is any danger in anaphylaxis why should we take a chance in immunizing patients against diphtheria if the immunity only lasts fourteen days?

Dr. Gilpin (closing): Personally, I would not advocate immunization. I have knowledge of two occasions where the family contracted diphtheria after they had been subjected to immunizing doses of antitoxin.

Dr. Rhamy's bill for $4.48 for telegrams to the senators and representatives on the chiropractic bill was presented. Motion carried that bill be allowed and an order drawn on the treasurer for the same. The vital points in the chiropractic bill presented.

Adjourned.

Meeting of Feb. 16, 1915

Society met in regular session in the assembly room of the court house with ten members present. Minutes of preceding meeting read and approved as read.

No clinical cases.

Subject of evening: "Acute Poliomyelitis" (with report of two cases), by Dr. Wm. Enslen.

DISCUSSION

Dr. E. E. Morgan: I saw Case 2 which has been reported by Dr. Enslen this evening. I arrived at a diagnosis by exclusion. There has not been much progress in the treatment of this disease. I have had two cases of my own; one following measles, with paralysis of the right arm for two weeks. Spinal puncture was not made in case mentioned. Intraspinal injection may hasten recovery.

Dr. Wallace: Thorough examination is indicated in what may seem an insignificant lesion. He sighted one case of gastro-intestinal disturbance which was fatal, and it was found that the condition was due to the ingestion of rat poison.

Dr. Hamilton: Are there any changes elicited in the electrical reactions in these cases?

Dr. Porter: I think it is a crime not to hold a post-mortem examination in sudden deaths from obscure causes. I think cold water has some relation to this infection.

Dr. Weaver: I think that we should insist on early lumbar puncture in suspicious cases.

Dr. Rhamy: Last week I made the statement that if an animal receives a small dose of protein and an interval of eight to fourteen days elapses before the second dose, anaphylaxis might develop; but if the second dose was given along about six days after the first dose, the animal would not develop anaphylaxis, and futher, that this second dose would render the animal immune thereafter. As a great deal of doubt was expressed as to the correctness of this statement, I took the trouble to look up the subject, and I find that I quoted Hiss and Zinsser almost word for word. Personally I have done no work in anaphylaxis and can only quote authorities. Anti-anaphylaxis is a very recent discovery, and therefore, there is little to be found in the text-books. The following quotations are, in fact, all that I could find anywhere on short notice.

Hiss and Zinsser (text-book of bacteriology) say: "After small initial doses of protein, the anaphylaxis state is usually well developed in about twelve to fourteen days. After larger doses, the time required for the developments may extend for weeks or months. When sensitized animals recover from the second injection, they are thereafter immune — i. e., they do not react to subsequent injections of the same variety of protein. This immunity, or anti-anaphylaxis, as Besredka and Steinhart have called it, appears immediately after recovery from the second injection. Anti-anaphylaxis may also be produced in animals which having received the first, or sensitizing dose, are injected with comparatively large quantities of the same substance during the pre-anaphylactic period — or as is sometimes spoken of during the incubation period. This injection should not be given too soon after the first dose, but rather toward the middle or end of the pre-anaphylactic period, for if given within one or two days, it will not produce immunity. Whether or not this immunity is transitory or permanent is not yet fully shown."

Besredka and Steinhart believe "that it lasts a long time, while Otto found that guinea-pigs immunized in the above manner lose their anti-anaphylaxis in about three weeks."

Park and Williams (text-book on Pathogenic Micro-organisms, 1914) say: That immunity against anaphylaxis lasts for a variable length of time."

Prudden (in 1914 edition of Delafield and Prudden Pathology) makes a still more emphatic statement, as follows: "If the animal recovers from the second dose to which it reacted, it becomes immune and does not react to further injections of the same serum. If the second injection is made within a few days after the first, no anaphylactic symptoms are produced, nor can they ever afterward be produced by large or small doses."

Vaughn gives his opinion: "That the animal is not rendered immune, but that the sensitization is delayed for a variable length of time." This, it seems to me, is only stating the proposition in another way, that is, transient immunity.

According to Besredka in a recent article in the *British Medical Journal*, "Anti-anaphylaxis (immunity) can be produced by a number of small injections of protein at hourly intervals, or by one small dose followed in about six days with a single large dose." He states, "that if doses are given daily, immunity does not take place, but instead the animal is sensitized so that after an interval of ten days the same anaphylaxis may develop following another injection."

This is also the view of Vaughn, and explains the cases cited last week, to prove that immunity against anaphylaxis did not take place. In view of the above quotations, I feel that I had authority for the statement that individuals could be immunized against anaphylaxis.

Dr. Porter: My impression was that there is no such thing as immunizing against anaphylaxis from any dose of a given serum.

Dr. Hamilton: As in the use of tuberculin, you should finish your three doses for diagnostic purposes within eight days, because after that time the temperature obtained may be due to anaphylaxis. I thought the same principle obtained in the use of any serum.

Dr. Weaver: I thought that the general opinion was that the reaction to tuberculin was an anaphylactic reaction.

Dr. M. F. Porter: It is easy to demonstrate the presence of anaphylaxis. Give a dose of serum to-day, then in a few days another dose and in the course of one, two or three years if the injection of another dose of alien serum is followed by a reaction, you have not created an immunity to anaphylaxis. I can recall such a case history where I obtained an anaphylactic reaction following the injection of Coley's fluid after a period of several years' abstinence from the use of this fluid, for the cure of a sarcoma and at the time of the occurrence of this reaction the fluid was exhibited for a recurrence of sarcoma.

Dr. Weaver: Since the plan of immunizing against anaphylaxis has been carried out by Besredka, they almost never have a death from this cause in France.

Extracts from the opium and narcotic laws passed by the government read. Bill of Gladys Miller for

$17 presented. Motion carried that bill be allowed and an order drawn on the treasurer for payment of same.

Adjourned.

Feb. 23, 1915

Society met in regular session in the assembly room of the court house with twenty-six members present. Meeting called to order by the president. Minutes dispensed with owing to absence of secretary.

CLINICAL CASES

Dr. M. F. Porter reported the case history of a female, 30 years of age; married; inserted a catheter into the uterus to interrupt a supposed three weeks' pregnancy, which was followed by bleeding for several months; chilly sensations and fever two days prior to entrance. Found protruding from the os a polypoid sort of growth. During the day this polyp was passed. Macroscopically, organized blood clot with a fibrous pedicle. She was placed on the table and curetted with a small curette and the scrapings were submitted to the microscopist. The examination of these scrapings showed malignancy. The uterus was removed. On opening uterus found in the fundus an elevated spot one-eighth inch thick which did not penetrate the muscularis. Diagnosis: Primary carcinoma of uterus.

DISCUSSION

Dr. Weaver: This spot in the mucosa from which this malignancy springs was about as large as a dime. I want to say that this area might be easily overlooked. The whole curettings should be sent to the pathologist for examination.

Dr. Rhamy: I have seen a number of polypi which have shown malignant degeneration. If these growths were left to remain within the uterine cavity, they could easily produce malignancy of the body of the uterus. I made the sections of this case reported by Dr. Porter, and it was the picture you would expect to see in a typical case of malignancy.

The paper of the evening, "Should the General Practitioner Do Tonsil Operations," was read by Dr. K. K. Wheelock.

DISCUSSION

Dr. A. E. Bulson, Jr.: There was a time when the question of the removal of tonsils was confined to the very thing that Dr. Wheelock is criticizing tonight. The proper removal of a tonsil requires considerable skill and practice. The general physician is willing to admit that he does not completely remove the tonsil in his operation. It would seem that a discussion of this subject smacks a little bit of "sour grapes," but the special men are doing tonsil enucleations in the wake of the general practitioners, who do incomplete operations. If there is any logic in the argument that special training and experience is required for special work then the specialist should be the one to do these special operations, for he is much better qualified to do the work.

Dr. Calvin: It seems to me that this is a two-sided question. I do not know if Dr. Wheelock outlined the line of demarcation between the general practitioner and the specialist. Sometimes we would be led to believe that the general practitioner should act as a guide post, and should refer his cases to the different special men in each certain line. As far as being mercenary is concerned, the general practitioner is the least mercenary of any man in medical practice. If the general practitioner is not capable of doing minor surgery, then he is not capable of practicing medicine.

Dr. Porter: To my mind the question is not between the general practitioner and the specialist, but one which involves the man who is the most competent to do the work. If the general man is called on to do some work with which he is not familiar, and the case is not one of emergency, then he is in duty bound to send that patient to one who is more competent to handle these cases. There are times when the specialist comes to cases in his own line of work which he had better send to another special man who is better able to handle that particular line of work; one who has had special experience.

Dr. Enslen: I have done some of this tonsil work, when the operation was done with the snare. I have followed the specialist in this line a good many times. I have had some good results and some poor ones. I feel that the special man should oftener coöperate with the general practitioner.

Dr. Weaver: I think the time has come when we can stop calling tonsillectomy a simple operation. I believe the operation is undoubtedly a hospital operation, as the after-results are among the most dangerous of any operative procedure. This is the most bloody operation done and incidents of post-operative hemorrhage are many and sometimes fatal.

Dr. Wheelock (closing): I have nothing to take back from the stand taken in this paper. There is no operation in the domain of special surgery which I approach with more fear than I do a tonsil operation, and I stay closer to the patient for the following twenty-four hours than in any other operation which I do. Lymphatic tissue does regenerate in the area occupied by the tonsil removed, and will sometimes require reoperation. I will say that the general practitioner can remove tonsils and do it well, but the average practitioner does not care to do this operation well, therefore, the most of these operations done by the general practitioner are poorly done. If this is true, then these cases had better be operated by a competent operator.

Application of Dr. I. W. Ditton presented and referred to the board of censors. No business.

Adjourned. G. Van Sweringen, Secretary.

BOONE COUNTY

Regular monthly meeting of the Boone County Medical Society was held at the Public Library, Lebanon, March 2, with eight members present.

Dr. R. C. N. Cook of Lebanon, read a paper on "Points of Special Interest in Urinary Analysis and Kidney Function Tests."

After generalizing on the advancement in the methods of obtaining information on the values of the analyses of urine and kidney function tests, the paper placed special emphasis on the "stability of the kidney function" as the only actual measure of its capacity to meet the work required of it; that to accept the maximum or minimum as a standard is fallacious and has brought many distasters. One or two examinations should not be deemed sufficient for

prognosis, but the number, varying as to the case, should be sufficient to assure us that we have obtained the average working capacity of the kidneys. That from the more complete observations and the finding of a stable function of the kidney, even though low, it is found that difficult operations can be performed successfully, pregnancy permitted, and many undertakings allowed which formerly were forbidden. Finally that it is the kidney with erratic function that is to be feared.

A number of items were mentioned that make toward more complete and accurate results. It is important to determine the amount of indican and especially in megrim—megrim is resultant from intesinal toxins and the forerunner of quite a percentage of cases of arteriosclerosis.

The value of acetone, and its tests, was mentioned and the statement made "It is immaterial whether the acetone is the cause or just coincident with the cause—its diagnostic value is the same."

The chromogen tests for kidney function were discussed at length and the phenolsulphonephthalein used for example. "They are the most valuable of our tests but are aided and completed by the other data."

DISCUSSION

Dr. J. H. Black, Lebanon: Mentioned eye cases showing vision below normal, headaches, and urinalysis by ordinary methods normal. When the phenolsulphonephthalein test showed decreased kidney function the ophthalmoscopic examination shows a hazy disk and tortuous vessels.

Dr. O. S. Taylor, Whitestown: General practitioners do not pay enough attention to the urine. The tests ordinarily should be done by one specially skilled in this branch of medicine.

Dr. W. W. Williams, Lebanon: Old methods become out of date and new tests required because of medical progress. Case of patient prepared for operation, and albumen found in urine. Function test showed a constant renal sufficiency, which is the paramount issue, and permitted the operation. The test is simple and satisfactory, but should be done by a specialist.

Dr. M. A. Armstrong, Lebanon: The finding of indican will sometimes show cause for an otherwise unexplained migraine.

Dr. Cook exhibited the apparatus necessary for the kidney function tests.

Dr. Williams reported a case of appendectomy with an unusually large appendix which was exhibited to the members. Also reported an unusual case of post-operative adhesions.

Secretary was instructed to arrange for a meeting open to the public to be held April 6 and to be addressed by Miss Ida J. McCoslin, R.N., of Logansport, president of the Indiana Nurses' Association, on public health topics.

A committee to arrange for the entertainment of the Ninth District Medical Society meeting, which is to be held at Lebanon May 20, was appointed as follows: Drs. P. B. Little, Whitestown, chairman; M. A. Armstrong, Lebanon, secretary; Clancy Bassett, Thorntown; H. A. Beck, Lebanon; and G. A. Schultz, Lebanon.

Adjourned. M. A. Armstrong, Secretary.

DELAWARE COUNTY

Meeting of March 5, 1915

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. building Friday night, March 5, and was called to order by President Dr. C. Melvin Mix. Board of censors reported favorably on application of Dr. Byrl R. Kirklin and he was voted into membership.

On motion of Dr. G. W. H. Kemper a resolution was passed endorsing the play "Damaged Goods."

Address of evening was made by Dr. Howard Drumm, who used as his subject, "Diagnostic Pitfalls." The diagnostic path is beset with dangers and humiliations; there is no royal road to diagnosis: The first warning is, obtain a thorough history of the case at hand. Carefully obtained data, well sifted, is a safe bridge over many a pitfall. The summing up and determining the relative value of data is of great importance. He who leans too heavily on laboratory findings will often find himself supported by a broken reed; on the other hand, he who does not make use of a well-equipped laboratory will find himself the author of many a bad guess.

Some of the diseases which offer abundant opportunity for mistakes are, typhoid fever, malaria, gastric and duodenal ulcers, appendicitis, acute intussusception. If one is attending a sick child, running a fever from an unknown cause, he will do well to follow the rule of examining the urine, blood and ears before making a diagnosis. Pyelitis is often diagnosed cystitis, malaria or typhoid fever. Cystitis per se is of rare occurrence, the real trouble is usually situated above or below the bladder. A certain diagnosis of acute uremia is practically an impossibility; urine of nearly all comatose patients contains albumin and casts. Nephritis should not be diagnosed on urinary findings alone. Cretinism and myxedema are frequently overlooked in milder cases and occasionally so in advanced stages. The latter is found in women six times as often as in man. Let us give rheumatism, la grippe, gastritis, stomach and liver cough their full share of blame for our ills, but we ought not to expect them continually to stand on guard to protect us in both foolish and faulty diagnoses.

Neurasthenia almost always has a congenital tendency for its basis, so we should expect it to appear in first half of life. How many of you have not seen a machine gun diagnosis. On Monday the patient had a little typhoid; on Tuesday, a little malaria; on Wednesday, a little bronchitis; on Thursday, a little la grippe; on Friday, a complication of diseases. On Saturday the family calls a consultant who suggests that an examination of the urine might be helpful in making a diagnosis; this is done and the discovery is made that the patient had pyelitis all week. To the first physician one guess is as good as another. His object is to guess as fast as the disease progresses, and trusts to the kindness of nature and the ignorance of the family to cover his ignorance. "There is no royal road to diagnosis." Nothing can take place of sincerity, careful training and unremitting toil.

Discussion was opened by Dr. A. A. Cecil, who noted with gratification the tendency of doctors to consult with brother practitioners who by equipment and experience are able to assist in making a correct diagnosis. An unprejudiced mind, an unclouded reason and good common sense are absolutely necessary to the successful diagnostician.

Adjourned. H. D. Fair, Secretary.

ELKHART COUNTY MEDICAL ASSOCIATION

Meeting of March 11, 1915

Regular session held in parlors of Elkhart General Hospital. Called to order by President Haywood at 8:00 p. m. Minutes of February meeting read and approved.

Paper, "Inspection in Diagnosis," G. W. Spohn, Elkhart. In a candid manner Dr. Spohn called attention to the tendency of certain members of the profession to violate the trust reposed in them by the public and to sacrifice the scientific viewpoint to the commercial in caring for their clientele. The public is partly responsible. A man's ability to diagnose and to treat individuals suffering from disease is judged by the number of people found in his waiting room and by his own egotistic statements. Dr. Spohn suggests two remedies, (1) placing the medical and surgical profession on a European basis, and (2) bringing all practitioners of the art into the medical society, where ethics may be properly taught and observed.

Paper, "The Value of Laboratory Diagnosis," E. M. Hoover, Elkhart.

The first requisite of a diagnostician is ability properly to estimate the relative values of his procedures. These values vary according to the nature of the malady, the stage to which the disease has progressed and the facilities at hand.

Prevention being of more importance than cure, the physician must be able to discern the first signs of approaching disease. To this end the laboratory is a means of highest worth. The nature of certain diseases is such that when other means become applicable little benefit can be derived from treatment, an example in point being nephritis and diabetes. The earliest signs of diseases of the blood are to be discovered only in the laboratory.

Laboratory diagnosis is of incalculable value to the biologic therapist. Unless the specific germ causing the disease is known the chances for success are almost nil. The key to success in serum therapy lies in the laboratory. Nevertheless, clinical diagnosis still holds the center of the medical stage. Were all but one of the methods of diagnosis interdicted, the profession to a man would choose to retain the clinical method, for it is seen to be the most extensively applicable. Laboratory diagnoses carried on in a slipshod way are worse than worthless. Not only must the test be accurately performed, but the results must be correctly interpreted. The possibilities of sources of error must be appreciated and the laboratory worker must be willing to concede that there are merits in other means of diagnosis, even though these yield results directly contrary to his.

Paper, "Roentgen-ray in Diagnosis," C. W. Haywood, Elkhart: Despite early contempt for the Roentgen-ray as a diagnostic aid, its eminent value is shown in the following statements quoted from several authorities:

It is of much confirmatory value in diagnosing states of the esophagus.

It is the most accurate method of diagnosing the size, shape and form of the stomach.

It is a simple method of observing the presence of obstructive disease situated anywhere in the alimentary canal.

It is the most useful method of diagnosing abnormal states of motility and mobility of the stomach.

It is often of value in directly diagnosing growths in the stomach walls, their size, mobility and location and the pressure of extragastric growths on the stomach.

Its use shows the presence of swallowed metallic articles located anywhere in the alimentary canal.

It is also of value in diagnosing the presence of gall, renal, ureteral and enteric calculi when these have calcium in their makeup, and adhesions connecting the stomach with surrounding organs or structures.

It may be used in noting the position and size of the kidneys, in the way of diagnosing renal tuberculosis, new growths and nephroptosia.

It is also of service in accurately diagnosing the position, size and shape of the colon.

The part of the digestive tract particularly to blame for the symptoms can be accurately ascertained only by means of most searching roentgenologic examination (Satterlee and Lewald).

It (the Roentgen-ray) not only bids fair to settle definitely the time required for the emptying of the *infant's* stomach under normal conditions and the effect of the various foodstuffs and salts on this time, but also to be of the greatest value in determining the nature and presence of pathologic abdominal conditions in early life (John Lovett Morse).

In diagnosis I have come to place reliance chiefly on the history and the roentgenogram (Chas. H. Frazier, Chas. P. Muller, William R. Rodman).

That consultant, who in the diagnosis of a difficult and obscure lung condition, has not brought to his aid the service of the Roentgen-rays, has failed alike in his duty to himself and his patient.—Lawson in *Practitioner,* London.

Dr. Haywood showed a large series of Ronetgen-ray plates, illustrating how each plate clinched the diagnosis in each case.

Paper, "Interpretation of Symptoms," A. C. Yoder, Goshen.

Dr. Yoder emphasized the value of going through a routine history-taking, physical, laboratory and Roentgen-ray examination in every case. Basing therapy on symptoms alone is bad practice, for example: headache and "rheumatism." Case cited illustrating nicety of diagnosis between early typhoid and appendicitis. Stomach trouble—a symptom of extragastric as well as intragastric pathology. "The habit of prescribing promiscuously diuretic elixirs and kidney pills for the many so-called kidney ailments seems to be an automatic act. The patient says *kidney,* and the sensation travels up the sensory nerve to the doctor's brain; a motor impulse returns and the doctor's arm reaches for the diuretics. It should reach for a catheter or a sound."

Case of traumatic hemiplegia presented before the meeting by Dr. Yoder and points in differential diagnosis shown in detail.

DISCUSSION

H. K. Lemon, Goshen: Skiagram print of foot showing undiagnosed condition in fifth metatarsal bone.

Miss A. E. Moloney, superintendent of the hospital, assisted by Miss A. S. Weber served the members and visiting physicians to a splendid buffet lunch.

Adjourned. James A. Work, Jr., Secretary.

HANCOCK COUNTY

The Hancock County Medical Society met in regular session March 11, 1915, at Greenfield. After supper, at the Columbia Hotel, the meeting was called to order by the vice-president, E. R. Sisson. There was only a fair attendance, but the meeting was one of interest.

A committee to draw up resolutions on the death of our president, Dr. Paul E. Trees, was appointed, consisting of Drs. W. A. Justice, C. K. Bruner and J. L. Allen.

Dr. W. D. Gatch of Indianapolis gave a very interesting and instructive talk on "Cancer or Malignant Growths in General."

Adjourned. Joseph L. Allen, Secretary.

LAKE COUNTY

Regular meeting of Lake County Medical Society was held at Gary Commercial Club, March 11, Dr. J. W. Iddings presiding. There were twenty-seven members present.

Application of Frank L. Townsley of East Chicago presented and referred. On motion he was declared duly elected to membership.

A notice of the anniversary dinner in honor of Dr. J. N. Hurty was read.

A communication regarding the autopsy reports from the service of Dr. Richard Cabot of the Massachusetts General Hospital, was read and the secretary ordered to subscribe for same.

That part of the Workmen's Compensation Act relating to medical attention was presented and discussed.

The following program was presented: "The Business Side of Practice," G. W. Miller; "The Dignity of the Profession," E. E. Evans; "The Wail of the Medical Pessimist," E. M. Shanklin; "The Medical Optimist," C. C. Brink; "The Psychology of Medicine," A. J. Lauer.

A general discussion of the various papers was held.

Adjourned. E. M. Shanklin, Secretary.

VANDERBURG COUNTY

Dr. Charles P. Emerson, dean of the Indiana University School of Medicine, was the guest of the society on the evening of February 28, delivering a highly entertaining and instructive address on "Nervous Diseases From the Viewpoint of Modern Medicine." The session was well attended and greatly enjoyed by the members present. A rising vote of thanks was tendered Dr. Emerson at the close of the evening.

"Surgical Treatment of the Prostate" was the subject of a paper read at the meeting of March 9 by Dr. A. M. Hayden. Dr. Hayden outlined the treatment in use in various clinics and then gave a résumé of the methods he has found most satisfactory, laying emphasis on the proper preparation of the patient before being brought to operation. The discussants for the evening were Drs. Warren W. Hewins, Hunt, Carl Viehe, Greenleaf, Hartloff, Eichel, Rose and Brose. Dr. Carl Viehe reported a cesarean section made necessary by a previous amputation of the cervix.

On the evening of March 3 Dr. Charles W. Yeck read a very concise and thorough paper on "Malaria," emphasizing the necessity of a microscopic examination of the blood in arriving at a diagnosis and detailing the treatment with quinine hypodermically. Dr. P. B. Combs read an exhaustive paper on "Cystitis." Both papers were generally discussed. In the discussion of Dr. Yeck's paper the members were divided in their opinion as to the frequency of malaria in southern Indiana.

Dr. P. H. Linthicum reported a case of diabetic coma which he had treated by the administration of sodium salts intravenously, the patient rallying for a short time following the injection. Dr. Carl Viehe reported a case of edema of the brain which he had treated with the intravenous injection of Fisher's sodium solution, with apparent good results. Dr. J. W. Lorenz reported two cases of gangrene of the lower extremities following the use of cold applications for the relief of pain.

Adjourned. Wallace C. Dyer, Secretary.

VIGO COUNTY

The ability to get along well with one's neighbors is a virtue to be emulated and an art to be cultivated. Anything that will disseminate a good fellowship among individuals or communities is worthy of the personal interest of each and the support of all. This is particularly true of our profession. The adoption of an informal luncheon to take the place of the first regular meeting of each month bids fair to be a successful move toward getting the members of the Vigo County Medical Society better acquainted with each other and the better the acquaintance the less likelihood there will be to have discord.

The meeting of March 2 was a pleasant affair and well attended. There was no regular paper or subject—in fact, "shop talk" has been practically tabooed at these meetings.

At the meeting of March 9, Dr. J. R. Gillum read a very practical and interesting paper on "Inflammation of the Middle Ear." The practical application of any knowledge that will lessen or mitigate the disastrous effect of this condition, whether it is a complication or sequela, is to be taken as a distinct gain to the patient, the community and the physician. Inflammation of the middle ear as a secondary result of adenoids and hypertrophied tonsils exists much oftener than we are willing to admit. Of course, the rational treatment is first to remove the obstructions and then prescribe constitutional treatment, personal hygiene and sanitary surroundings, together with such local treatment as the case permits. It is as a complication or sequela of scarlet fever that we see such disastrous results, and less frequently and usually less severe in influenza, measules and pertussis.

March 16 the members were entertained by a paper in two parts on the subject of "Diphtheria"—pathology and bacteriology, by Dr. Duenweg, and pathology and treatment, by Dr. Cook. Dr. Duenweg went into a detailed resumé of his part of the subject, showing familiarity with the technic of making examinations for the bacillus diphtheria. Dr. Cook, in his opening part of the paper, said there was only one real treatment of the disease and that was the early and free use of a reliable antitoxin. The

speaker said that in the treatment of this disease procrastination was the handmaid of the undertaker and that of those who died many could have been saved by the decisive and vigorous use of large doses of antitoxin. The important point was made by one discussant that the initial dose should be relatively large, 2,000 to 5,000 units, and its effects carefully watched, as all persons are not equally susceptible to the antitoxin—some requiring a much larger dose than others to produce the same result. If then it is necessary to repeat the dose, the physician is able to decide the number of units necessary to use. There is much yet to learn about antitoxin and its uses. It is probable that some children are immune, or nearly so, to its effects within their body, and yet diphtheria will pursue its deadly course when once infection has obtained, despite the free use of antitoxin. These cases are probably closely related to those apparently made worse and a fatal termination hastened by a free use of the serum.

March 23. Case report by Dr. Fink.

March 30. On the program it was stated there would be a paper by Dr. Jett on "The Unknown." The essayist was not present and it was voted by the society that the doctor had at last realized the magnitude of his undertaking to compass in a paper for one evening the unknown in medicine, and had decided to go to the picture show.

Adjourned. A Member.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

Waterman's Tonic Restorative.—Examination in the A. M. A. Chemical Laboratory showed this "epilepsy cure" to be a bromid mixture, containing bromide equivalent to 17.6 grains potassium bromid per fluidram. The recommended daily dose of five teaspoonfuls corresponds to 88 grains potassium bromid. Caring little for the health or safety of those who use the nostrum, the promoters advise an increased dosage if required "to stop the 'Fits'," thus leaving the dosage with the user, who is assured that the nostrum is "safe" (*Jour. A. M. A.*, March 6, 1915, p. 847).

Dr. Kline's Nerve Remedy.—This "epilepsy cure" is sold by the R. H. Kline Company, 45-47 East Twentieth street, New York City, this being the same address as that of the Lexington Drug and Chemical Company which sends out the Waterman "epilepsy cure" (see above). Examination in the A. M. A. Chemical Laboratory showed this bromid mixture to be practically identical with Waterman's Tonic Restorative (*Jour. A. M. A.*, March 6, 1915, p. 848).

Liquid Paraffin (Liquid Petrolatum).—W. A. Bastedo reports the results of a clinical investigation made under the auspices of the Therapeutic Research Committee of the Council on Pharmacy and Chemistry to determine the relative efficiency of the different preparations on the market. Three specimens were sent out: a heavy Russian liquid petrolatum, a light Russian liquid petrolatum and an American liquid petrolatum — being distinguished only by number or letter. From extended trials in hospitals it is apparent that all acted alike. Only slight differences as to palatability were noted by some (*Jour. A. M. A.*, March 6, 1915, p. 808).

Sanmetto.—The Council on Pharmacy and Chemistry finds that Sanmetto is a secret nostrum the exploitation of which is an invitation to haphazard, uncritical therapy and a menace to public health. It is claimed that "Sanmetto is a blending of true santal and saw palmetto with soothing demulcents in a pleasant aromatic vehicle," but neither the identity of the "demulcents" nor the quantities of the other ingredients are given. The recommendations for the use of Sanmetto are unwarranted, absurd and vicious. The advertising claims are likely to induce some physicians to belittle the importance of diseases of the sexual organs and to be content with the prescribing of Sanmetto to the detriment of the patient and the danger of the community (*Jour. A. M. A.*, March 13, 1915, p. 926).

Colchi-Sal.—Colchi-Sal is sold by E. Fougera & Co., Inc., in capsules stated to contain the "active principle" of cannabis indica, colchicin, methyl salicylate and "appropriate aromatic adjuvants." It is recommended in "Gouty and Chronic Rheumatic Manifestations," "acute cases of Gout," "intestinal autointoxication or dyspepsia," "bilious headaches," etc. The Council on Pharmacy and Chemistry found Colchi-Sal ineligible for New and Nonofficial Remedies because the indefinite character of the "active principle" of cannabis indica made its composition secret, because it was advertised indirectly to the laity, because unwarranted therapeutic claims were made for it, because the name does not indicate the habit-forming cannabis indica and because the composition was held unscientific (*Jour. A. M. A.*, March 20, 1915, p. 1016).

Waterbury's Compound.—Four years ago the Council on Pharmacy and Chemistry reported unfavorably on "Waterbury's Cod Liver Oil Compound." Having been requested to consider again the product, now known as "Waterbury's Compound," the Council found that there was no evidence that it is a substitute for cod liver oil. It held that Waterbury's Compound is advertised with misleading claims and therefore voted that no further consideration be given to it (*Jour. A. M. A.*, March 20, 1915, p. 1016).

Strychnin and Caffein as Cardiovascular Stimulants.—F. H. Newburgh has studied the effects of strychnin and caffein in acute infectious diseases. He finds that strychnin sulphate in medicinal doses does not increase the output from the heart, slow the pulse or materially raise the blood pressure. He concludes that there is no logical basis for its use as a cardiovascular stimulant. Further, he finds that caffein sodio-salicylate, in ordinary dosage, does not raise the blood pressure or slow the pulse. His experiments did not determine if caffein increased the blood flow (*Arch. Int. Med.*, March 15, 1915, p. 458).

Neurilla.—To show how a practically worthless mixture may be exploited by means of ill-considered testimonials, the Council on Pharmacy and Chemistry publishes a report on Neurilla, apparently the sole output of the Dad Chemical Company. Neurilla, according to the manufacturer's claims, depends for whatever virtues it has on two generally discarded drugs, skullcap and passion flower, present in unstated amounts, "aromatics" and 20.3 per cent. alcohol. It is advertised as a "nerve tonic" and is said to be "A Valuable Aid in the Treatment of Fevers, Colds, La Grippe, etc." Inquiries sent to some of the physicians whose testimonials were used to promote Neurilla brought replies indicating these testimonials to have been given thoughtlessly and on insufficient experience. In most cases the writers stated that they had abandoned the use of Neurilla long ago (*Jour. A. M. A.*, March 27, 1915, p. 1093).

Guertin's Nerve Syrup.—This is an epilepsy treatment sold by the Kalmus Chemical Co., Cincinnati, Ohio. Examination in the A. M. A. Chemical Laboratory demonstrated Guertin's Nerve Syrup to be essentially a mixture of several bromides, the bromide content being equivalent to 13.9 grains potassium bromide per fluidram. The recommended daily dose of 4 to 8 teaspoonfuls is equivalent to 55.6 to 111.2 grains potassium bromide. While possessing all the potency for harm that resides in secret mixtures of the bromides, the purchaser of this nostrum is led to believe that it is harmless (*Jour. A. M. A.*, March 27, 1915, p. 1094).

BOOK REVIEWS

The Tuberculosis Nurse; Her Functions and Qualifications. A Handbook for Practical Workers in the Tuberculosis Campaign. By Ellen N. LaMotte, R.N., Graduate of Johns Hopkins Hospital, former Nurse-in-Chief of the Tuberculosis Division, Health Department of Baltimore. G. P. Putnam's Sons, New York and London. Price $1.50.

Miss LaMotte's experiences as recorded in this book will prove of immense value to both nurses and physicians who are interested in this particular line of work. Her experience and advice should be of great value to laymen, nurses and physicians in starting and carrying out the fight against tuberculosis, and the book will undoubtedly make successful many campaigns, which would otherwise fail after the work was well started. Every tuberculosis society should have at least one copy of the book in its office and should insist on each of its nurses and officers reading it.

Diseases of the Bronchi, Lungs and Pleura. By Frederick T. Lord, M.D., Visiting Physician, Massachusetts General Hospital and Channing Home for Consumptives; Instructor in Clinical Medicine, Harvard Medical School. Octavo, 605 pages. Illustrated with ninety-three engravings and three colored plates. Cloth, $5.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

This is an excellent book upon a subject that demands the attention of every physician in general practice. Rare judgment has been employed in selecting from available material the essential facts so necessary for practical application, and the author is to be congratulated on his comprehensive grasp of the needs of the student and practitioner. Extended consideration is given to conditions which simulate tuberculosis, and the essential points on which differential diagnosis may be based are stated in detail. The presence and significance of the tubercle bacilli in pleuritis and similar conditions is very fully treated.

The use of the bronchoscope receives more than passing mention. The importance of the early diagnosis of aspirated foreign bodies is emphasized, and the symptoms and signs are stated in detail. The amenability of abscess and gangrene of the lungs to surgical relief is stated, and, while the consideration as regards diagnosis is from a medical point of view, the indications for surgical intervention are comprehensively noted. Attention also is paid to the surgical aspects of empyema, actinomycosis and eachinococcus disease of the lungs. The importance of Roentgen-ray examinations is not overlooked, and radioscopic findings are described.

The chapters dealing with the recognition of different types of pneumococci as a cause of lobar pneumonia; the results of animal experiments with the pneumococcus; metabolism in pneumonia; immunity; preventive inoculation; special methods of treatment, particularly by immune sera; the causes of hemoptysis and its recognition as a manifestation of tuberculosis, present all that modern science has accomplished in these fields in a manner that establishes its usefulness.

A valuable section deals with artificial pneumothorax in the treatment of pulmonary conditions, especially tuberculosis, and discusses conditions in which experimental puncture is dangerous. The etiology and pathology of each disease is stated fully and most clearly. Symptoms are presented in detail as are the diagnostic data, including the bacteriology and microscopy. Prophylactic measures, whenever possible, are suggested, and minutely complete directions for treatment close the discussion of each type of disease.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume III. Number V. Octavo of 190 pages, 61 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published bi-monthly. Price per year: Paper, $8; cloth, $12.

The October number of Murphy's clinics is exceptionally good. The opening pages are devoted to talks on diagnosis in which renal and ureteral stone, hematuria, intrathoracic sarcoma, meningitis, and perinephritis abscess are considered in a lucid and satisfactory fashion. Fifteen clinical lectures on a variety of topics complete the volume. Probably the most valuable lectures are the three devoted to inversion fracture of the ankle. It is unusual that each patient of Murphy's knows and is able to remember for several years, the exact manner in which the foot was turned when the fracture was obtained. Not a great many authorities will agree with Murphy's belief that it is the irritation of the dura which plays the most important rôle in the production of traumatic epilepsy. Dr. Murphy's argument that Charcot joints result from regional anesthesia rather than "trophic changes" because Charcot joints occur only in the knees and ankles in tabes and in the elbows and wrists in syringomyelia is decidedly weak. Murphy does not seem to have accepted the modern views regarding tumors of the testicle.

A careful audit of the December clinics disclosed that the liabilities are greatly in excess of assets. The assets consist of a general diagnostic talk, an excellent clinic on metastatic arthritides, a lecture on tuberculous epididymitis and a few discussions of other surgical subjects. The liabilities consist of one picture of Dr. Murphy seated before a large mirror, twenty-three views of Murphy's offices, one picture of Dr. C. L. Mix and one picture of Dr. R. J. Tivnen. It will be noted that the liabilities exceed the assets in more than the customary proportion.

There is no legitimate excuse for placing these photographs in a scientific publication. Some skeptics in the medical profession, among whom the reviewer includes himself, will doubt the statement of the editor that "we have received in the recent past a large number of requests for portraits and photographs, as well as for the plan and scope of the new

offices which Dr. Murphy and his staff now occupy." Unquestionably the publishers worked hard and long before they "secured the consent of Dr. Murphy to make a complete series of photographs of the building and offices."

Local and Regional Anesthesia, including Analgesia. By Carroll W. Allen, M.D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M.D., of Tulane University, New Orleans. Octavo of 625 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $6 net; half morocco, $7.50 net.

While several excellent books dealing with the general subject of local anesthesia have been published within recent years, yet no book has gone into the subject as comprehensively as this one by Dr. Allen. It gives the essential elements in the successful application of local anesthesia to major surgery as well as a systematic and detailed description of the methods of anesthesia suitable to operations in the different regions of the body.

While great transformations have taken place in our methods of general narcosis, yet the problem of shock, the secondary nausea and vomiting, the pulmonary complications, embolism and thrombosis, and above all, the degenerative auto-intoxications following the action of these somatic poisons on the eliminating and other organs, still remain to be reckoned with.

The medical profession is, therefore, ready to welcome a method of controlling pain in surgical operations which, though still in the process of development, has advanced to the point where it gives promise of supplanting general anesthesia in a very large and growing number of surgical conditions. This is attested by the fact that at the Charity Hospital, attended by Dr. Allen, the results obtained have proved so satisfactory that fully 55 or 60 per cent. of the major operations in the division under his charge are performed solely by peripheral anesthetic procedures, exclusive of the spinal or subarachnoid analgesias which are not included in the category.

One of the best proofs of the success of any method of practice, as pointed out by Professor Matas, one of the pioneers in the study of local and regional anesthesia, is the confidence it inspires among the men of the profession and in their willingness to have it applied to themselves. Schleich, in his "Schmerzlose Operationen," tells us how his clinic was besieged by doctors who, needing surgical relief for various ailments, were anxious to be operated on by him painlessly, but without the unconsciousness of general narcosis. This is the experience of every operator whose reputation for skill in local and regional methods is confirmed by his results.

In the discussion of this subject Dr. Allen seems to have covered the entire field with that thoroughness that is characteristic of the conscientious student and teacher. After considering the various local anesthetics, with their properties and physiologic actions, and devoting an extra chapter to Adrenalin, he describes with clearness and directness the principles of technic, including a classification of the methods of local and regional anesthesia in which cocain and the other allied analgesic drugs are utilized as the active agents. He also considers the use of morphin and scopolamin and combined methods of anesthesia with indications and contra-indications. The anoci-association and its practical application, of Crile, also receives attention. The work concludes with chapters upon spinal analgesia and epidural injections, including technic of operations on the head, scalp, cranium, brain and face; and finally a chapter on local anesthesia of the organs of special sense.

All in all, the book represents the latest and most advanced methods and teachings concerning regional anesthesia, and it will be welcomed by the medical profession in general and surgeons in particular.

A Text-Book of Diseases of the Nose and Throat. By D. Braden Kyle, A.M., M.D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fifth Edition. Thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $4.50 net.

The fact that five editions of this work have been issued is in itself testimony that it is appreciated by a large and increasing number of physicians; but aside from all this, the reputation of the writer as a practitioner, teacher, and author is sufficient to give the book a demand among discriminating buyers. It has been well said that opinions may differ, and yet it is probable that no exception would be taken by clinicians of experience concerning the soundness of the views expressed by Dr. Kyle in this very comprehensive work.

A feature that is appreciated is the completeness with which each subject has been handled, even at the expense of an occasional repetition, for the same subject must be considered in some manner while discussing other subjects. Thus, upon turning to a certain subject the reader finds everything pertaining to that particular subject.

This new fifth edition has been thoroughly revised and much new material has been added. Among additions may be mentioned chapters upon Vaccine Therapy; Lactic Bacteriotherapy in Atrophic Rhinitis; Salvarsan in the Treatment of Syphilis of the Upper Respiratory Tract; Sphenopalatine Ganglia Neuralgia; Negative Air-Pressure in Accessory Sinus Disease; Chronic Hyperplastic Ethmoiditis; Congenital Insufficiency of the Palate; Lactic Bacteriotherapy in Pharyngeal Affections; and an article describing the Removal of a Plate of Artificial Teeth from the Esophagus. Many subjects considered in previous editions have been entirely rewritten to conform to present day theory and teaching. This is particularly true of those chapters devoted to surgical treatment. The author's statements are clear and concise, and his recommendations, while seemingly dogmatic, are intended to be specific for definite conditions. To the specialist some of the material may seem to be elementary and therefore superfluous, yet in view of the fact that the book is intended to be useful to the student and general practitioner as well as the specialist the comprehensiveness is justified.

The new illustrations, some of which are in color, are valuable additions. Full credit is given to the opinions of others, and the reader finds frequent reference to both American and European literature. In every way the book is an excellent guide for those who desire late and approved information on diseases of the nose and throat, and it maintains the high standard set by former editions.

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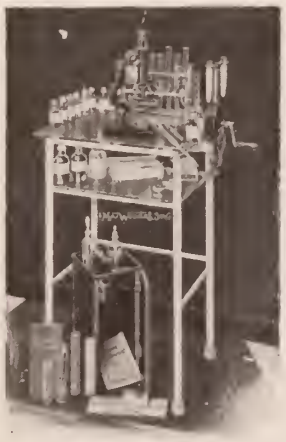

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ORIGINAL ARTICLES

TECHNIC OF THE WASSERMANN REACTION *

BERNHARD ERDMAN, M.D., F.A.C.S.
INDIANAPOLIS

The complement-fixation test for syphilis, known as the Wassermann reaction, is the outgrowth of the original research of Bordet and Gengou who published their results in 1901 under the title "La Fixation d' Alexine."

DEFINITION OF TERMS FREQUENTLY USED

Antigen. Any substance which, when injected into an organism, can stimulate the production of antibodies, has been conveniently termed antigen.

Patient's Serum. The serum of the blood of the patient to be examined.

The blood is drawn, allowed to clot at room temperature, placed in the incubator for one hour, and then in the refrigerator. Separation of the clot from the walls of the vessel with a sterile platinum needle, aids in the separation of the serum. Before using in the test proper, the serum is poured into a sterile centrifuge tube, centrifuged at high power for a few minutes in order to clear it. (For Wassermann it is inactivated at 56 C. for a half hour to destroy complement.)

Complement. The serum from guinea-pig blood. This term was introduced by Ehrlich. By the term complement one understands one of the two active principles concerned in hemolysis, bacteriolysis and other instances of cytolysis, complement is one active principle, amboceptor (hemolysin) the other. The term is synonymous with cytase of Metchnikoff and alexine of Bordet. Complement is normally present in all serum.

Amboceptor (hemolysin). The serum from the blood of an animal which has been immunized with blood cells of another species gives us amboceptor. Their correct name is immune hemolysins. They are thermostabile; resist heating to 56 C. and are specific. They require complement for the development of their hemolytic action. The injected animal, develops in its serum antibodies which are biologically analogous to bacteriolysins and differ from them only in that they cause disintegration of erythrocytes instead of bacteria. The term is synonymous with fixateur of Metchnikoff, substance sensibilatrice of Bordet, preparator of Gruber, and copula of Müller.

After immunization the serum of the immunized animal gradually loses its hemolytic power but may be rapidly increased by a few injections of the red cells first used in the immunization. According to Citron, hemolysins must fulfill three conditions to be of value in this reaction.

First: A test showing that hemolysin in strong dosage but without complement is ineffective.

Second: A test indicating that with hemolysin, complement in the dosage used is ineffective.

Third: A test which shows the sodium chlorid solution is isotonic.

The correct titration of hemolysin according to Citron, consists in allowing varying quantities of hemolysin with a constant amount of complement to act on a constant amount of washed erythrocytes. Destroy the complement in the hemolytic serum, make the desired dilutions and use fresh guinea-pig serum for the complement.

* Read before the Indiana State Medical Association at Lafayette, Sept. 24, 1914.

Erythrocyte suspension. Sheep blood is collected in a sterile wide-mouthed bottle, in which are a number of glass beads, vigorously shaken immediately in order to prevent clotting and is thus defibrinated. A 5 per cent. suspension in normal saline solution is prepared by thoroughly washing the defibrinated blood at least three or four times with normal salt solution. If the normal saline is isotonic for the particular cells used, and the washing has been carried out under aseptic precautions, the cells will remain in good condition for at least three or four days, and in some instances longer. It is, however, advisable not to use cells more than four days old. One of the objections to the old Wassermann is the necessity for obtaining fresh sheep cells, but this seems to me a trivial matter when the importance of the test is considered.

ANTI-COMPLEMENTARY SUBSTANCES AND ANTI-COMPLEMENTARY ACTION (NOGUCHI)

Substances possessing the power of reducing or removing totally the action of complements, are said to be anti-complementary. Most acids, alkalies and certain salts have anti-complementary action. In certain sera there are often principles possessing these properties. Human serum gradually acquires this action on standing. Repeated injections of fresh serum into an animal of another species is followed by the appearance of anti-complements. (Ehrlich and Morgenroth.) Bacterial infection may cause the serum to become anti-complementary but it is said that heating to 56 C. for a half hour rids the serum of this difficulty.

THE ORIGINAL METHOD

In the original method five factors entered into the test just as five factors enter into the reaction at the present time.

(a) Antigen. Pest bacilli emulsion.

(b) The serum to be tested which contains the antibody, heated to 56 C. in order to destroy the native complement.

(c) Complement. Fresh serum of a normal animal or human being.

(d) Hemolysin (amboceptor). Inactivated serum of a rabbit immunized against sheep or goat's erythrocytes or the serum from the blood of a guinea-pig injected with rabbit's blood cells.

(e) The respective red blood cells are washed to free them from their serum containing complement.

Controls were used of inactivated normal serum, for the antigen, and for the amboceptor just as we now use them in the Wassermann reaction.

Bordet and Gengou found positive results in a number of different culminations, beginning with pest bacilli and using anthrax vaccine, typhoid bacilli, coli bacilli, typhoid bacilli varied, killed tubercle bacilli, whooping cough bacilli and meningococci (Citron).

Wassermann and Bruck's modification which immediately preceded the Wassermann reaction, as applied to syphilis, followed. The factors in this modification were the same, with the notable exception of the antigen. The antigen instead of entire bacteria contained only bacterial extracts. The other factors were the same, using the respective red corpuscles and using controls as in all serological work.

Bacteriolysis or hemolysis cannot take place without the presence of complement. A number of complicated experiments were carried out by Ehrlich and Morgenroth, Metchnikoff and Bordet and Gengou to prove that not only do complements of different animals vary, but that numerous complements exist within one individual serum. (Conception of multiplicity of complements.)

Metchnikoff believed that each serum contained at least two complements, the microcytase and macrocytase. Bordet and his school while agreeing with the idea that complement varies in different animals, deny its multiplicity and contend that any given serum contains but one alexine or complement. Bordet and Gengou's experiment which corroborated the existence of only one complement which is the foundation of the most important method of serum diagnosis, complement fixation, used typhoid bacteria, inactivated typhoid immune serum and normal serum.

Widal and Lesourd were the first to make practical application of the complement fixation property and found that the Bordet and Gengou reaction could be obtained far more frequently and earlier with the serum of typhoid patients than the agglutination test. Following these experiments Wassermann and Bruck employed complement fixation with the idea of demonstrating the existence of the respective antigens in diseased organs. Their experiments were conducted with tuberculous glands and lungs. The experience as gained by the employment of a complement fixation

test in tuberculosis, led to its application in the study of syphilis.

Syphilitic human organ extracts were first employed with the idea that they contained a specific virus. A number of experiments were made with the serum of monkeys which had been immunized with such extract; later it was found unnecessary to inject the organ extracts, as their serum (after infection with the spirochete pallida) gave complement fixation. The next step was to try the reaction in man. The first experiments did not give the desired results (Wassermann, Neisser, Bruck and Schucht). Then followed Neisser and Bruck's attempt to find a luetic antigen in the serum. This attempt also was unsuccessful. Meanwhile Citron proved that luetic antibodies were present in almost all cases of syphilis, the reaction being dependent on two rules. First, the older and more violent the disease as well as recurrent, the more frequently will a positive reaction be obtained. Second, the reverse is true in the presence of thorough treatment and the shorter the interval since the last treatment.

In applying this principle to the diagnosis of lues, numerous experiments were made by Wassermann and his collaborators and in 1906 Wassermann, Neisser, Bruck and Schucht, published their complement deviation test in the *Zeitschrift für Hygiene.*

In the original method the antigen employed was a salt solution extract of the liver from a syphilitic fetus. Citron (1914) states "In the early work of Wassermann the antigen was described as deteriorating very easily; its activity would either be entirely destroyed, or it would become anti-complementary. This author is firmly convinced that these changes are brought about by careless handling of the extract or its exposure to light. If properly taken care of its activity remains constant."

Method of Craig and Nichols. Craig and Nichols use for antigen alcoholic extract of syphilitic fetus liver, inactivated serum with a human hemolytic system and 40 per cent. complement. The method is thoroughly described in Bulletin 3 issued by the Surgeon General of the U. S. Army and is sent gratis to those who apply for it.

THE NOGUCHI MODIFICATION

In *The Journal of Experimental Medicine,* Vol. XI, 1909, Noguchi published his article "A New and Simple Method for Serum Diagnosis of Syphilis." In June, 1909, at the meeting of the American Medical Association in Atlantic City, Noguchi read a paper and I saw him using the reagents dried on filter paper and watched the reaction carried out. He said one may carry the test tubes in the vest pocket for a sufficient length of time instead of using an incubator. Noguchi claims that the native anti-sheep hemolytic amboceptor in human blood is a factor of considerable importance and due to its presence one will frequently obtain a negative reaction when it should be positive. He overcomes this by using an anti-human hemolytic system.

In the second edition of his work he makes note of the fact that he no longer recommends the use of the agents dried on filter paper. He uses instead of the anti-sheep hemolytic system, anti-human; instead of alcoholic or watery extracts of fetal luetic organs, acetone insoluble antigen, and 40 per cent. complement.

WASSERMANN'S TECHNIC (CITRON, 1914)

Antigen. The preparation of the antigen is almost identical with that previously referred to as that of Michaelis, four times the weight of the organ of 0.5 per cent. carbolic solution is used and the mixture placed in a brown bottle and shaken for twenty-four hours. Centrifuge and the supernatant fluid poured off into a brown bottle, and placed in the ice chest. After several days of sedimentation the fluid assumes a yellowish-brown opalescence and can now be used as luetic antigen. It should not be exposed to light or heat, should not be shaken and its contents should not be pipetted off, but carefully poured off without disturbance to the sediment. The author is firmly convinced that the changes which were said to occur formerly, are brought about by careless handling and exposure to light. If properly taken care of its activity remains constant. The titration of the antigen should be carried out by using 0.8, 0.6, 0.4 and 0.2 c.c. of the extract in the presence of 0.1 c.c. complement, twice the hemolytic dose of amboceptor and 1 c.c. 5 per cent. sheep cells for its anti-complementary properties, and in the same quantities plus 1 c.c. 5 per cent. sheep cells for its hemolytic qualities. If the antigen is not hemolytic in 0.4 and not anti-complementary in 0.4 according to the rule of Weil and Nakayama, this antigen will be employed in one-half of 0.4 or 0.2 c.c.

Complement in 1 : 10 dilution; hemolysin in twice the hemolytic dose; sheep cells 5 per cent. The tests are always controlled with normal

extract. It might be noted that the editor of Citron's work, Dr. A. L. Garbat, states that he has worked with guinea-pig's heart extract in thousands of tests and has found it to give perfect results.

Method described by Dr. William L. Moss in Emerson's Clinical Diagnosis. Alcoholic extract of syphilitic fetus liver is used as antigen. Complement 1 : 10 dilution. All sera 1 : 10 dilution. Hemolysin in double the hemolytic dose. Sheep cells in 5 per cent. suspension. In a personal communication from Dr. Moss, he states in reply to my question, Why do you dilute your serum 1 : 10? "it has been found by experience that this dilution usually gives fixation of complement in a syphilitic serum while the corresponding dilution of normal serum does not." In his antigen titration, he uses naturally, known positive and known negative sera but uses them in dilution of 1 : 5. In reply to my question, Why he uses this dilution? he states: "In actual practice we do not know in advance whether the serum to be tested is syphilitic or normal, hence we must adjust the various reagents used in the test so that with a given concentration of antigen and normal serum hemolysis will occur. You will note in the example quoted in the book one has considerable leeway in the concentration of the antigen to be used anywhere between 1 : 4 and 1 : 20; therefore, to exclude accidental variations as much as possible, we select a concentration of antigen somewhere between the two, in order to have a safe margin on either side." Dr. Moss says normal serum used in excess may have an anti-complementary action and thus inhibit hemolysis. Likewise the antigen if used in too great concentration may have the same action. Furthermore, the combined anti-complementary action of antigen and serum may be greater than that of either one alone. It is to be remembered that in performing the Wassermann reaction the variable is the serum and the test may be regarded as a quantitative one, so that it is necessary to so adjust the reaction that with a syphilitic serum, you get no hemolysis, while with the same quantity of normal serum, hemolysis occurs. It would seem to me, accepting Dr. Moss' statements, he bases his antigen titration on the rule of Weil and Nakayama that "complement is bound not only by antigen plus amboceptor, but also by large doses of antigen itself dependent on the normally present amboceptors existing in the serum employed for complements."

METHOD OF CYRUS W. FIELD

Antigen. Alcoholic extract of guinea-pig hearts with one-half saturation cholesterin.

The method of preparation is given in detail in the Yale number of the *Archives of Internal Medicine*. Twenty c.c. of the cholesterinized extract is evaporated and desiccated and the residue weighed. The extract is then used in such dilution that 1 c.c. of the diluted extract represents 1 mm. of the cholesterin lipoids. Anti-sheep hemolytic amboceptor and complement in 1 : 8 dilution. At least two units of amboceptor and two and one-half units of complement are used in the test. Racks holding eight tubes are set up and into each of seven tubes is placed 0.1 c.c. of the serum to be tested and 0.2 c.c. in the eighth tube.

Tubes No. 1 and 8 are used for controls. Antigen is added to six tubes as follows: 1 c.c., 0.8, 0.6, 0.4, 0.2 and 0.09 c.c. The titration of the complement having determined the quantity to be used usually 0.5 c.c. (1 : 8), the antigen and complement are added to the serum and the whole incubated at 37 C. for from forty to fifty minutes. The amboceptor and red blood cells suspension are mixed in their proper proportion and sufficient salt solution added so that each cubic centimeter of the mixture represents at least two units of amboceptor and 0.5 c.c. red cells. The mixture is incubated at least one-half hour before being added to the serum-antigen-complement mixture. The results are read off as soon as both control tubes show complete hemolysis and according to the following scheme: 0 equals complete hemolysis; 1 slight inhibition of hemolysis; 2 marked inhibition of hemolysis; 3 equals complete inhibition of hemolysis.

THE IMPORTANCE OF STANDARD ANTIGEN

In a recent monograph (Bissell) note is made of the different systems and methods in the use by various workers with the Wassermann reaction. The antigen seems to be the reagent which has given rise to the greatest amount of discussion. If the test were a true antigen-antibody reaction, the antigen which would give this result is naturally the correct one to be used, but in view of the fact that the reaction is obtained with various antigens, even chemical substances, it would seem that an antigen which would tend toward uniformity in the results of different workers would offer a decided advance. This antigen is proposed by Field. For some time there has been a tendency toward the use of cholesterinized

antigens. A number of workers with whom I have discussed this question agree that the reaction is clearer and cleaner when made with cholesterinized antigen. This antigen also seems to increase the velocity of the test. As noted under the method of Field each cubic centimeter of the diluted antigen contains 0.1 mg. of the combined lipoids and cholesterin. The method of preparation is not difficult and the antigen is rarely if ever anti-complementary or hemolytic. The large number of guinea-pig hearts used reduces the variable to practically a negative, and the subsequent standardization by evaporation and weight precludes any variation in determining the quantity to use in the test.

It would seem to the writer that this antigen is, for the present at least, the correct one to use. A standard antigen is unquestionably a step in advance. Reactions whether made in New York, Indianapolis or San Francisco will be reported the same by Wassermann workers following the method of Field. Any modification which does not disturb the fundamental principles of the test or rather, which takes cognizance of these principles, and which will increase the value of the test from a clinical standpoint is to be desired. May I be permitted to express my sincere approval of this antigen extract after working with it in more than five hundred tests?

INTERPRETATION OF RESULTS

Noguchi states the amount of coloring (due to liberation of hemoglobin) and the bulk of red cells in the tubes when compared with the negative and positive controls, governs the reading and interpretation of the results of the test. Complete inhibition when comparable with positive control is called positive; complete hemolysis comparable with the negative control, is called negative. If 60 to 70 per cent. of corpuscles (bulk) is dissolved, reaction is doubtful and should not be taken into consideration for diagnosis. If in known lues, this slight inhibition is evidence of the presence of disease and the patient requires more treatment.

It would seem to me the interpretation of what follows applies to the instance of known luetic infection. If there is a faint trace of hemolysis the main bulk of the corpuscles being intact, the reaction should be called weakly positive. A more intense hemolysis with about 10 to 20 per cent. dissolution of the corpuscle mass, should be called very weakly positive; while 30 to 40 per cent. hemolysis is designated as faintly positive. Neither the weakly positive nor faintly positive reaction should be accepted as a definite diagnosis of lues without the presence of strong clinical evidence in favor of such diagnosis. The reaction may sometimes be very weak in the presence of undisputed evidence of syphilis and if necessary several examinations of the serum should be made in succession.

Dr. Moss states in interpretation of results: If there is over 50 per cent. fixation, the test suggests strongly a syphilitic infection. If under 50 per cent. fixation, especially if there is only 10 to 20 per cent. fixation, the reaction is probably negative. In these cases, however, one is guided largely by the history and other evidences of infection. In such cases one may give the so-called provocative dose of salvarsan and repeat the Wassermann test.

Technical details. Racks which hold 8, 16 or 24 tubes are used. Pipets 0.2 c.c. graduated in 0.01, 1 c.c. graduated in 0.05, 1 c.c. graduated in 0.1, 5 c.c. and 10 c.c. graduated, will be found convenient. A dry heat sterilizer, a water bath and an incubator are necessary. Test tubes which will hold a sufficient quantity and fit the racks are required in considerable number. Absolute asepsis is not required but chemical cleanliness is essential.

DISCUSSION

Dr. B. W. Rhamy, Fort Wayne: On account of the well established efficiency and wide range of application of the Wassermann test, as has been amply proven by a world of scientific workers, an intelligent opening discussion of this most important subject can in my opinion be given better in a carefully prepared statement than offhand and I will therefore with your indulgence read what I have to say.

The Wassermann test is to my mind the greatest advance in medical diagnosis in the last decade. Through it the diagnosis and treatment of syphilis have been revolutionized and we are now able with a reasonable degree of certainty to tell when our syphilitic patients are cured. To be sure, there are *some* discrepancies in the test, nevertheless, with the exception of a few old fogies the test is now accepted as being by far our best means of diagnosis and guide to the treatment of syphilis. Not *every* case of syphilis will give a positive reaction at all times, but experience has shown that when a positive reaction is obtained by an experienced, reliable worker, there is no question but that the patient has syphilis. Probably the greatest trouble just now with the

Wassermann test is that too many men are trying to get glory for themselves by inventing some original improvement on the test. So this man is making the test one way and that man some other way. The result is that there is some confusion as to the percentage of reliability, the results by different writers ranging from 65 to 95 per cent. The same confusion exists regarding the methods in which reports are made, making urgent the need of standardizing reports.

Some reports will show the stages of reaction as strong, mild, weak positive and negative. Another method consists of indicating the strength of the reaction by plus signs. Still another variation is a report on two kinds of antigen; for example, a blood might be reported "negative" to ordinary antigens and "weakly positive" to cholesterin antigens, etc. Several methods have been advocated to standardize the positive readings. Heiman (*The Journal A. M. A.*, May 1, 1910) attempted by using graduated tubes to determine by scale the amount of blood corpuscles unhemolyzed, calling complete hemolysis "zero or negative" and entire absence of hemolysis, 100 positive, thus having for the strength of the positive reaction a scale ranging from 1 to 100. Another method for standardizing the results is to use varying amounts of the patient's serum to determine the smallest quantity necessary to produce a positive reaction. Still another is to use varying amounts of antigen although what is to be gained by this last procedure I cannot see. While there is some virtue in varying the amounts of serum and still more in Heiman's scale, after all, the strength of the reaction, to my mind, does not amount to anything. What the patient wants to know is whether or not he has syphilis, and whether it be weak positive or strong positive, so long as it is positive, he needs treatment. One reason for making this statement is, that on account of phenomena which we cannot explain, the positive test will vary in strength from time to time in the same individual whether he has had treatment or not, and there may be some rare intervals when it will show negative. The fact, however, that these negative phases may occur, should warn physicians that it may be wise to make more than one test in case a negative finding is given in a strongly suspicious case.

Naturally any improvement tending to make the test more reliable and more delicate, is a welcome advance, and it has been advocated, that the addition of cholesterin to the alcoholic antigen is such an advance. Up to date, however, the evidence shows that cholesterinized antigen makes the test too delicate, as it apparently gives some reactions in some non-syphilitic cases. One observer in explanation believes that it gives positive reactions in cases of cured syphilis as well as active cases. It seems advisable, therefore, to rely on the plain lipoid antigens until long experience including autopsy findings establishes definitely whether or not cholesterin addition really is of value. The Hecht-Weinburg modification of the Wassermann test is the latest departure and consists of using varying quantities of alcoholic antigen and depending on the natural complement and anti-sheep amboceptor in the patient's blood. As these latter factors vary considerably in different individuals it follows that although the Hecht-Weinberg modification is said to give about 15 per cent. more positives, it should not be depended on entirely but used only as a check to the original Wassermann test.

I believe simplicity favors accuracy and have not as yet found that any of these newer complications of technic are of sufficient practical value to supersede the original Wassermann methods, and I continue to mark reports "negative; doubtful one plus or weak; two pluses or moderately strong; three pluses or strong positive; four pluses or very strong positive." I believe that if all serologists would do likewise there would be more accuracy in the compared results of different workers and there would be more general confidence in the intrinsic value of the test.

Regarding the specificity of the Wassermann test, it is now definitely known that while it has not biologic specificity, it can be considered "clinically specific," for with only a few negligible exceptions it responds only to syphilis. As to the phenomena of the reaction, the common understanding now is that it is complex, taking in "syphilitic antibodies and lipoidal substances" but depending largely on the latter which while present in small amount in normal blood are greatly increased in syphilis. It seems to me very probable that all antibodies are globulins in nature and are included in these lipoidal substances.

In regard to the syphilitic cases whose tissues become tolerant to the spirocheta pallida and in consequence of which do not give a positive Wassermann test, experience has shown that a small dose of salvarsan called a "provocative dose" will often stir things up so that during the three or four days following the injection the test will be positive. Mindful of these few cases showing negative reactions, I want to assert that in my opinion unusual evidence should be necessarily present to warrant a diagnosis of syphilis in the face of a negative Wassermann of both blood serum and spinal fluid.

As to the treatment, there is no doubt in my mind that the mixed treatment of salvarsan and mercury will cure syphilis. In my opinion

salvarsan should be given, followed by mercury, for three or four months, then stop the treatment for a week or ten days and make a Wassermann. If positive, repeat this formula and keep on repeating until a negative Wassermann shows. When this occurs stop the salvarsan injections and keep up the mercury for another three months, then a week's rest followed by a Wassermann. If negative, more mercury, if positive, more salvarsan. When three negative Wassermann's are obtained in succession, four months apart, I consider the patient well.

Dr. Henry O. Mertz, LaPorte: The theoretical discussion of the points involved in the Wassermann reaction has been fully presented, and in discussing Dr. Erdman's paper I can but emphasize some of the conclusions he has drawn.

The life of the great majority of scientific discoveries is remarkably short, and but seldom do they accomplish all that the overzealous discoverers claim for them. We apparently have an exception in the Wassermann reaction which has already "justified" itself to an extraordinary degree in its practical value in the diagnosis of syphilis. Yet after investigation, the theoretic grounds on which it was first explained, have become doubtful and somewhat untenable. It has been strikingly demonstrated that an antigen specific in nature derived from syphilitic tissue is not necessary. We now know that alcoholic extracts of certain normal organs, or even sodium glycocholate may be used in the reaction. Dr. Erdman's paper has forcibly emphasized this fact in his plea for the antigen derived from the heart muscles of the guinea-pig. Relative to this antigen, Landsteiner, Miller and Potzl in 1907, and Miller in 1908, in reporting on the value of an antigen made from the fat-free heart muscle of the guinea-pig, inclined to the conclusion that the reactions were less intense and the end readings less definite than where extract of syphilitic tissue was used. But this antigen was an alcoholic extract of the pulverized muscle (Miller, p. 100). If the method of Field in giving us a cholesterinized antigen instead of the alcoholic one of Mueller, overcomes this difficulty without sacrificing the reliability of the reaction, it would seem the desideratum in the technic of the Wassermann reaction has been attained. When the human hemolytic method of Noguchi is used in preparing the antigen and suspension of corpuscles in conjunction with the method of Field in preparing the antigen, as has been outlined today, the universally applicable and standardized Wassermann reaction is possible.

Yet in interpreting the end-result in a Wassermann, certain factors may influence it, leading us into error. As stated, the greatest difficulty has been with the antigen. Various ones were used, giving varying results with different workers. Again, as indicated, human sera when standing for some time may develop anti-complementary action. Also a syphilitic serum loses much of its power to react when allowed to stand. Again, the result may be influenced by the phenomena observed by Wechselman "complementoid stoppage," when luetic serum may react negatively. Especially when the commercial product of the Noguchi paper is used must care be exercised in using the amboceptor. Also when any alcoholic or aqueous antigen is employed, the serum should be inactivated, otherwise we may get a non-specific fixation due to proteids present.

Dr. Erdman states that in the presence of undisputed clinical evidences of syphilis the reaction may be very weak. It may be added, the blood Wassermann may be negative. In some of our cases of cerebrospinal syphilis we have found this to be true, and I have in mind one case where the cerebrospinal fluid Wassermann was very weak. I might add as a matter of technic, that in determining the reaction in the spinal fluid, increasing quantities of the spinal fluid should be used up to 1 c.c. On those cases of weak blood or fluid Wassermann we may take advantage of the phenomena observed by Herxheimer, and determine the provocative Wassermann.

I think we eventually must consider the Wassermann phenomena as a symptom of syphilis ascertained by means of this biological reaction. It is, as are other symptoms of syphilis, capable of appearance, disappearance and reappearance. Its presence or absence may be but the result of the natural course of the disease, or of medication. I think that when through medication it has been caused to disappear, it means but that this one symptom has been temporarily or permanently eradicated and that its non-reappearance must be considered as most encouraging. I refer here particularly to the blood Wassermann. It is important that the proper reagents be employed with correct technic in every case; but no more so than that the estimation of the value of this reliable laboratory finding in a given clinical case be correct. The reliability of the biological diagnosis of syphilis is established. The biological treatment of syphilis is very much a failure.

Dr. Bernhard Erdman (closing): The antigen of Landsteiner, Miller and Potzl, spoken of by Dr. Mertz, is an alcoholic extract of guinea-pig heart with no cholesterin added. This antigen has never been standardized after the method proposed by Field, and while it is true that the basis of Field's antigen is this antigen, it does not conform to the latter. It may be true that the human hemolytic system

with the Field antigen may give a universally applicable standardized Wassermann, but I see no reason why the sheep system is not just as capable of being used, and in view of the fact that it is not at all difficult to obtain sheep cells whenever wanted, the sheep system should be the one of choice, especially on account of the amount of human blood necessary to immunize your rabbits in order to obtain anti-human hemolytic amboceptor. If the serum is removed from the clot within ten hours, I am quite sure that the anti-complementary difficulty spoken of will be found to have entirely disappeared. Noguchi himself some time ago entirely discarded the use of his paper reagents and does not recommend their use under any conditions.

It is very true that the blood Wassermann may be negative, while the spinal fluid is positive. It would seem to me that there is no necessity for varying the amount of spinal fluid in the test when you are varying the amount of antigen. Dr. Mertz says that the reaction may be positive and negative within short periods. This was brought out in a recent paper by Craig. Preliminary standardization of reagents must be performed before making the test.

I am glad to know that the biological diagnosis of syphilis is established, but cannot agree with the statement that "the biological treatment of syphilis is very much a failure." In my own experience I have had repeated opportunities to observe the Wassermann disappear, using the cholesterinized antigen, and remain absent six months.

In answer to Dr. Rhamy's statement as to the need of standardizing reports, using this method of eighteen units, one cannot fall into error, because the number of tubes in which you have complete inhibition will give you the number of units to be read. Cholesterinized antigens do not make the test too delicate. In a series conducted by Dr. Potter of the Central Hospital for the Insane, using the plain alcoholic antigen and cholesterinized antigen, the marked disparity in favor of the cholesterinized antigen readily is seen. In discussing this matter with him he tells me that he feels a considerably greater amount of confidence in his results with the cholesterinized antigen than with the alcoholic extract.

I have never obtained a positive Wassermann with the Field antigen in an individual who did not have some evidence of infection.

I want to take exception to the time of making a Wassermann after discontinuance of treatment. I do not believe that a week or ten days is sufficient length of time in order to allow that substance to return to the blood which inhibits hemolysis. At least one month should elapse before making the test.

BORDER-LAND TOPICS IN OPHTHALMOLOGY AND OTOLARYNGOLOGY *

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The time has arrived when specialism is an accepted fact in all professions and the Jack of all trades can be considered a thing of the past. It can unhesitatingly be said that specialism has made great strides in medicine and is considered by many as overdone. The general practitioner of former years is practically impossible in large communities and only possible in sparingly populated districts. Furthermore, general surgery while still considered the shining light in practice, is also being rapidly subdivided into the various surgical branches. This can be very easily demonstrated by examining the various curricula of the leading universities, as well as the transactions of the associations of pedagogy. So, for instance, the chair of surgery with one head of the department has as its associations, subheads in the various surgical departments, as ophthalmology, otolaryngology, orthopedic surgery, gynecology and obstetrics, genito-urinary surgery. The same is true in the subject of medicine in that general medicine is subdivided into neurology, pediatrics, dermatology, etc. The various laboratory methods employed in diagnosis and treatment are again subdivided, some belonging to both the divisions, as for instance, radiology. This at once shows the absolute necessity of border-line divisions, where one branch will merge into the other. Further subdivisions are made in the subject of surgery, as, for instance, oral surgery, neural surgery, etc., and then within these, special surgical accomplishments are sought as, for instance, surgery of certain organs, such as the thyroid gland, the stomach, etc.

It is the purpose of the writer to discuss this question of border-line surgery which comes within the confines of the ophthalmologist and otolaryngologist, desiring to show the need of having a broad knowledge of the subject of general medicine and surgery, being versatile in the means of diagnosis of conditions which are intimately associated with diseases of the eye, ear, nose and throat, and to further prove the indispensable association or team-work between various specialists and specialties. By way of illustration:

* Read before the Indiana State Medical Association, Lafayette, Sept. 24, 1914.

In the case of a patient having symptoms of sinus disease and at the same time having considerable difficulty with his teeth, it is very essential to be associated with a dentist. Another case will have symptoms of intracranial involvement following sinus disease and other nervous phenomena not well enough accounted for by this involvement from the sinuses. In such a case a neurologist will have to be consulted. And another patient who has symptoms of a chronic focal infection and the particular focus is not clearly in evidence, a general diagnostician or internist with all the laboratory facilities will have to be called in.

Where then is the limitation of the ophthalmologist and otolaryngologist in his specialty?

I have expressed my views on the subject a number of times and in a chairman's address before the American Academy of Ophthalmology and Otolaryngology several years ago, I presented the reason for them. I have adhered to these principles and am very glad to see that a number of the gentlemen who at that time voiced their disapproval very strongly against these views have since then adopted them. I have also noted that abroad as well as in this country the tendency is in the direction as then expressed. Briefly speaking, those views were about as follows:

1. An ophthalmologist and an otolaryngologist are intimately associated and each must either be prepared to treat these four branches or have an associate who will treat one or the other of these two specialties. It is the latter arrangement that the writer employs. In this connection I would like to call attention to a recent paper presented before the American Laryngological Association by Dr. Barnhill, "Environmental Surgery in Oto-Laryngology," in which he lamented the conditions existing in that men operated that had absolutely no ability even though they had a good training. He recommended the division of the work into the two classes. Those that have natural tendency and ability to operate and those that have not. These latter men are excellent in the employment of non-surgical measures and many a case that is now often operated upon would be cured without operation by this expert in treatment. I am absolutely in accord with these views.

2. Ophthalmology and otolaryngology cannot be considered complete without taking into account the management of the adnexa, as for instance structures within the mouth, of the face, neck and brain.

It will be seen at a glance that an ophthalmologist and otolaryngologist is really a head and neck specialist and that is precisely what the writer believes. He is not expected to be an expert in the entire domain, in the diseases of the head and neck, but he should at least be prepared to recognize the conditions which are intimately associated with the diseases of the eye, ear, nose and throat. I am of the opinion that certain "hobbies" will thus be established by the different men, and by that particular hobby he will be identified.

Permit me now to call attention to some of these special border-land subjects or hobbies in which I have interested myself and give my personal results in each condition, necessarily briefly, however.

PLASTIC AND ORAL SURGERY

In considering the plastic operations about the head and neck we may specifically mention nasal deformities, palate, lips, cheeks and external ear deformities, muscle and nerve plastics; plastic about the eyelids and eyeball; plastic of the larynx, trachea, pharynx and the upper portion of the esophagus. In order not to take up your valuable time now, I will present some stereoscopic photographs of cases that have come under my personal observation of the conditions mentioned and will subsequently report them in detail.

Most of these cases consult in the first place the ophthalmologist and otolaryngologist, yet in looking over the reports in the literature the writer finds that the surgery was usually performed by general surgeons. Why? I shall leave the answer of this question to yourself.

HYPOPHYSIS

There is probably no field of medicine in which there is so much speculation at the present time as in the domain of the glands of internal secretion, of which the hypophysis is one, and yet so much positive physiological laboratory work has been accomplished as to make one think that probably some day these glands of internal secretion will play a most important part in the diagnosis and treatment of disease. The hypophysis has been under consideration for a good many years since Maré and Sir Victor Horsley called attention to the disorders of this structure. Acromegaly is one of the most important results, and it has been found that it is usually a tumor, either an adenoma, sarcoma or cyst of the anterior lobe which was responsible for this

change in the growth of the body. Froelich has shown the opposite, namely, a stunted growth with overdevelopment of adiposity due to changes of the pars media of posterior portions of this gland. That is to say, the hypophysis is made up of two distinct portions with an intermediary portion separating them, the anterior or glandular portion, and the posterior or cerebral portion. Both may be involved in the pathological process at the same time. The close relationship of this gland, when enlarged, to the optic nerve shows its importance to the ophthalmologist, since the loss of vision of the temporal side of the retina, especially if on both sides (bitemporal hemianopsia), is the first symptom that a patient may complain of. And the headache with the corresponding loss of vision is the other important symptom which may appear long before any of the changes in the growth become manifest.

The rhinologist is very little concerned in this disease, except that it has been found that the best route to reach the hypophyseal gland is by way of the nose. I desire to present the various methods that are in vogue in the operation for the relief of pressure from the changes in the gland, and in conclusion present my own method, which I first developed on the cadaver and subsequently operated on two patients with success.

CRANIAL ROUTE

1. Krause—temporal osteoplastic flap.
2. Killiani—frontal osteoplastic flap.
3. Cushing—subtemporal flap.

CRANI-ORBITAL ROUTE

1. McArthur method.
2. Frazier's method.

TRANSNASAL AND SINUS ROUTE

1. Kanaval method.
2. Hirsch's method.
3. West's method.
4. Citelle's method.
5. Chiari's method.
6. Trepoff's method.
7. Writer's method.

TRANSOROPHARYNGEAL ROUTE

1. Hoffmann and Katz' method.
2. Preusing's method.

While doing this work and from my experience in the work on the sinuses (nasal accessory), I noted the ease with which one could reach the sella turcica by way of the antrum, posterior ethmoidal cells and sphenoid sinus route. This route to reach the sphenoid sinus was first suggested and practiced by Jansen, and while taken up enthusiastically by several rhinologists, yet it has never become very popular for the opening of the sphenoid in sinus disease. It has, however, always appeared to me that the method offered a better exposure and more direct inspection of the sinus than the transnasal method. The same is true of the exposure of the sella turcica by any transnasal route. It is, furthermore, a much shorter distance than through the anterior nares. While there is no doubt that Hirsh's latest method, which requires the removal of the nasal septum submucously and then the entrance of the sphenoid, and so open the sella, is by far the best route yet suggested, and the number of cases thus far operated upon have proved most successful, I believe that the method I suggested has a number of advantages and is feasible in practice as shown by the two cases successfully operated on.

TECHNIC OF OPERATION OF WRITER'S METHOD

1. Incision is made above the gingival margin about ¼-inch in the soft tissue of the upper lip, beginning in the median line above the second central incisor and carried externally to the first molar.

2. The soft tissues are severed and the anterior surface of the superior maxilla exposed in the same manner as when opening the antrum.

3. Elevation of all the tissues as far as the inferior orbital margin and laterally to the zygomatic fossa.

4. Retractors pull upward and forward (mouth closed) so as to expose the entire anterior surface of the antrum.

5. By means of an electric burr or biting forceps the entire anterior surface of the superior maxilla is taken off. The intra-orbital nerve is not injured in the procedure.

6. The middle turbinate is now removed and the nose packed with gauze.

7. The posterior ethmoidal region through the antrum is now opened by means of curet and nasal punch forceps and the posterior ethmoidal cells are curetted until the gauze packing is reached.

8. The antrum is now packed to prevent the accumulation of blood.

9. The nasal packing is removed and a probe inserted into the sphenoid sinus as a guide.

10. Remove the gauze from the antrum and remove the anterior wall of the sphenoid by the usual manner of curets and punches. The septum between the two sphenoid sinuses should also be removed.

11. By means of Hirsh's beveled chisel, three incisions are made into the floor of the sella turcica and this little tongue-shaped piece of bone lifted off by the same chisel and removed by breaking it off from its attachment.

12. By means of Hirsh's two angular spatulas, small particles of the thinned-out floor of the sella turcica are removed and the opening further enlarged by sphenoid punches.

13. The dura is now incised with Hirsh's bistoury and any desired incision made to enlarge the opening by the same instrument. If the growth is a cyst, then that will probably terminate the operative procedure; but if it be a tumor, then the same or part of it is removed by punches and curettes.

14. A cigaret drain is placed into the sella turcica and led through the antrum. The remaining portion of the incision in the mouth is closed by two or three stitches.

INTRACRANIAL COMPLICATIONS FROM NOSE, THROAT AND EAR AFFECTIONS

I desire to confine my remarks to those intracranial complications resulting from suppuration of these primary infected structures, and not dwell upon the subject of neoplasms. trauma, etc. The most important part of this subject has to do with the diagnosis, and I believe that in no department of medicine has there been such progress as in ophthalmology and otolaryngology in reference to the intracranial complications. The grand work of the Vienna school in regard to the diagnosis and treatment of the labyrinth and brain by Barany, Neumann, Ruttin and others; the splendid work by Mygind, Menasse, Bregier and others on spinal puncture for diagnostic and therapeutic purposes; of Kopetsky and Haines on diagnosis and surgical treatment of meningitis, and finally Balance, Jones, McKernon and Day on sinus thrombosis mark the grand epoch in this line of work. The literature is teeming with reports of cases by otolaryngologists and ophthalmologists. Unfortunately, in the majority of instances the results were fatal in the severer forms of intracranial complications, yet there is not any doubt in comparing the statistics when this work was done solely by general surgeons the mortality rate was very much greater than when handled by the otolaryngologists. In the face of all this the writer has studied the article recently published by Professor Starr, in which the statement appears very clearly that there is no reason why an otologist or rhinologist should ever attempt to operate within the cranial cavity, simply because in the majority of the cases that he has seen that were thus operated on, calling attention to brain abscess in particular, he has found insufficient drainage and a fatality due to this cause. I wish to answer this statement by calling attention to the above statistics, which will demonstrate very easily between cases operated within the cranial cavity by competent otological and rhinological surgeons and those by general surgeons. I wish to emphasize the phrase "competent otological and rhinological surgeons." In a recent article which I published entitled "Failures and Successes in Intracranial Surgery," in which I gave my statistics in the past fifteen years on the above-mentioned subject, I had occasion to go into the literature quite fully and can unhesitatingly say that this border-land subject of brain surgery and otolaryngology must certainly be accredited as belonging to the domain of the latter.

NECK SURGERY

The most important subjects to consider in this line are the thyroid gland, tuberculous glands of the neck, secondary malignant involvement, diseases of the salivary glands, branchial cysts and carcinoma of the larynx.

THYROID GLAND

The ophthalmologist is most frequently the first to be consulted in disease of the thyroid gland when it is the subject of hyperthyroidism, either from the appearance of the eyes (exophthalmos) or the common symptom of headache over the eyes. It is the recognition of the fact that the thyroid gland is diseased and yet not at all enlarged that is important in the diagnosis and treatment of this affection. It has been furthermore shown by laryngologists (Shurley, Theisen, etc.), as well as those that pay special attention to the thyroid gland (Beebe) that pathological conditions of the nose and throat particularly the tonsils are frequently found in connection with hyperthyroidism, but not many have laid claim to the fact that the removal of such pathological conditions of the nose and throat has cured cases of hyperthyroidism. The removal of the thyroid gland has, however, when the patient is in condition to be operated on, given the best results.

The large or parenchymatous, cystic or colloid goiter is of particular interest to the laryngologist in so far as it involves the recurrent laryngeal nerve and so produces paresis or paralysis of the muscles of the larynx or compresses the larynx and trachea to the extent of causing constriction and so obstructs breathing,

or by pressure on the esophagus, especially by the posterior lobe, causes great difficulty in swallowing. Since this symptomatology usually brings the patient to the laryngologist, it is he who has the management of this condition. It has been my privilege to have observed, treated and operated on a fair number of all varieties of thyroid gland diseases and would say that it is one of the most satisfactory parts of the border-land conditions to treat. The technic is easy and the results are as a rule excellent. The recurrent laryngeal paresis that so frequently results from operation due to the inflammatory reaction is usually transitory.

TUBERCULOSIS OF THE GLANDS OF THE NECK

In regard to tuberculosis of the glands of the neck, it is the primary focus of infection that requires the greatest attention. This primary focus is usually situated within the mouth and throat, although nasal conditions are frequently responsible for the same. The tonsils are looked upon to-day as the greatest source of infection of glands of the neck, and while the tonsils are not very frequently found tuberculous, it is due to their diseased condition that the tubercle bacillus finds easy passage through them and lodges within the regional lymphatic glands. Recognizing this fact, the management of tuberculous glands of the neck has taken a marked change. Instead of the radical excision of all the glands of the neck, which often had to be repeated two or three times, it is the practice now to remove the primary focus of infection, the tonsils, etc., and wait for the possible resolution of the enlarged glands by additional proper systemic as well as local treatment. If after that the glands have a tendency to break down or do not disappear they are then operated on. It has been the routine practice of the writer in the past eight years to do this, and in only very few cases when the glands were truly infected with tubercle bacilli, especially when caseations had already taken place, was it not necessary also to operate externally, but never necessary to do the radical operation as before. I wish to call attention to two therapeutic measures employed in the treatment of tuberculous glands of the neck, aside from surgical procedure, which have given me excellent results, namely, Roentgen ray and sunlight combined, and the subcutaneous injections of iodipin (iodin oil) in increasing doses from three minims to one dram. Both the exposures and injections are given three times a week or even daily.

SECONDARY MALIGNANT INVOLVEMENT OF THE NECK FROM THE NOSE, THROAT AND EAR

This is such a vast and important subject that not merely a paper, but even a book could easily be written, yet I must satisfy myself to just mention the most salient points.

The diagnosis of carcinoma and sarcoma is comparatively easy from the microscopical examination, and the treatment is the most discouraging chapter in the practice of medicine. Particularly is this true of carcinoma. If, however, one is so fortunate as to see a malignant growth (carcinoma) early, then a thorough operation, removing the primary seat of the disease as well as all the tributary regional lymphatic glands in the neck, whether enlarged or not, offers some hope of a cure. The larger number of such cases that have come under my observation have either progressed too far for such a radical measure to be entertained, or if the primary seat of disease was removed perhaps thoroughly enough, the glands were not, simply because they were not large at the time. This is a mistake. I would like to call attention to the wonderful statistics of St. Mary's clinic, Rochester, Minn., in the cases of carcinoma of the lower lip, where routinely the submaxillary and submental lymph-glands are removed en masse.

In regard to sarcoma, it is well known that the prognosis is much more favorable, since the thorough removal of the primary seat of the disease will be sufficient to establish a cure, simply because the regional glands are very seldom or never affected.

In this connection I would like to speak about the employment of Radium as well as deep-penetrating Roentgen-ray therapy by a Coolidge tube in malignant disease. Of the cases of superficial carcinoma or epithelioma of the nose, throat and ear, including the mouth, it has been my fortune to have cured practically every one of seventeen cases, although in some there were recurrences, but they were immediately subjected to further and more vigorous application of these remedies and finally good results were obtained. In deeper-seated malignant disease, particularly carcinoma, my results were absolutely negative as to cure by simple application of radium; but by applying the radium for a week or two daily for one hour over the various locations of the growth and then operating, but not necessarily radically, and then again applying the radium postoperative, I believe there is some hope. In this treatment the Roentgen ray is associated with the radium. This question,

of massive doses of radium, has been found unnecessary, and ten to twenty mg. of pure element is all that is needed.

But some very interesting scientific observations were made, especially in carcinoma of the larynx. One patient in particular, who was subjected to large doses and prolonged applications of radium, died four years after the first microscopical examination was made, without any metastases anywhere in the body, as shown by post-mortem examination. In fact, the specimen of the larynx and esophagus removed post mortem shows the remaining carcinomatous cells crenated and deficient in the nuclear substance. The patient had symptoms of unusual character, which are probably those described by some of the European authors as toxic from the excessive treatment by radium. In regard to the deep-penetration treatment by Roentgen ray, will say that we have followed the technic of Kroenig and Gauss, and I feel sure that just as good a result can be obtained by this method of treatment as by radium.

SALIVARY GLANDS

The diseases of the salivary glands are comparatively rare, aside from those of the infective type, as mumps, and the most frequent conditions met with are obstructions within the duct producing cysts and abscesses. The definite swelling and tenderness over the particular gland is pathognomonic in the diagnosis, and the most important fact to remember in the treatment is the establishment of free drainage through the various ducts as soon as possible. Not infrequently calculi are the cause of such obstructions and the radiogram will never leave one in doubt in the diagnosis of such a condition. The greatest difficulty that I have experienced was the surgical treatment of fistula of these glands following neglected abscess or infected cysts, especially those of the parotid, owing to the location of the facial nerve within it.

CARCINOMA OF THE LARYNX

Most of the members present are quite familiar with the diagnosis of carcinoma of the larynx, so it will not be necessary to go into that part of the subject, but I will simply confine myself to the surgical intervention, for that alone offers a possible cure.

When one reads the reports of two such men as Sir Felix Semon and Sir St. Clair Thompson, as well as the last discussion before the American Laryngological Congress held in Washington, one would naturally adopt the proposition of laryngeal fissure with the thorough removal of the growth. Yet my personal experience with this method in a fairly good number of cases has been absolutely negative, and I believe I voice the expression of many experienced laryngologists. In opposition to this above-mentioned favorable report on laryngeal fissure, I wish to call attention to the statistics of Gluck and Crile of primary laryngectomy for this disease and in addition will say that while my personal experience with this method has also been most discouraging, yet out of fourteen cases so operated, namely laryngectomy, two are living, eight and five years since operation. I am, therefore, disposed to look upon this method of procedure, when a positive diagnosis has been made, with greater favor than laryngeal fissure, and would do the latter only if not permitted the former. My reasons are that by once opening the larynx or cutting into the cancerous mass, secondary implantation cancer must develop.

DISCUSSION

Dr. E. De Wolfe Wales, Indianapolis: I like Dr. Beck's ideas very much. I believe that there is not enough team-play between the specialist and the general practitioner, as well as other specialists. But I also believe there is a specialty within a specialty. For instance, I have had so few cases where bronchoscopy was indicated that I would not attempt it, or any other of the border-line operations, such as those on the thyroid.

I would like to ask the doctor how this operation on the sphenoid differs from Jansen's operation.

I think it is very necessary for us to know of the symptoms of hyperthyroidism, as Hertogle has so well told us, so that we can recognize the infiltration which often taken place in the tonsil, the turbinates and adenoid tissue.

I have referred many cases of tuberculosis of the glands of the neck to Roentgen-ray men, and these patients have all gotten well with this Roentgen-ray treatment without any further operative measures. In fact, some cases that had been operated on two or three times, with recurrences, got well under the Roentgen ray. I have had six cases of ulceration of the cord which have healed up, but the lungs were also treated as well as the ulcers in the cord. All of those patients are living and have very fair voices.

Dr. J. F. Barnhill, Indianapolis: This is, in my judgment, one of the most important papers brought here, and I think it ought to be thoroughly discussed. It deals with a class of cases in which I have been very much interested. I agree with Dr. Beck that those who

know intimately the anatomy of the part and the cause of the disease ought to follow it to its termination, and do such surgery as should be done.

Dr. Beck speaks of this as being border-line surgery. It seems to me that we ought to go further than that and call it *our* surgery. It is not border-line surgery, in my judgment; it is a surgery that belongs very clearly to the work of the nose, throat, ear and eye men. There was a time when the specialist was looked upon as a man who dealt with and treated the two cavities in the nose, the larynx and the drum cavity. Very little was said of the mastoid, and very little about sinus disease — in fact, very little about anything except polypi and the acute and chronic inflammations of these very limited cavities. In the beginning the border-line, of which Dr. Beck speaks, was very narrow, but it grew wider and wider, until now there is no border-line—it is just simply the surgery of the head, because there is no part of the head that cannot be involved in the work which Dr. Beck has alluded to to-day.

I recently presented this very subject before the American Laryngological Association, and in this presentation I advocated very much what Dr. Beck has advocated, only a little bit wider in viewpoint. I also advocated another thing, namely, that there probably will be a cleavage in our work. There are certain men practicing our specialty who do not desire to be surgeons, but there are those also who do desire to do surgery, who will put energy into it, and this work ought to go to them. There is no one, so far as I know, who has the training that the laryngologist has for removing the hypophysis. He is the man who ought to do it. It seems to me a great deal clearer that the laryngologist ought to remove a thyroid than that the gynecologist should remove a thyroid. In Buffalo very recently they had a symposium among gynecologists concerning the thyroid conditions. It seems to me we are the men who ought to bring up a symposium on that subject.

But in regard to this cleavage of which I speak, if, instead of taking a short trip to Europe yearly, the laryngologist will make a short trip to the dissecting room and go over his head surgery each year, and work the thing up as the surgeon must work it up, and know what he is going to do, and who is going to do this work, then we will have a reason for doing it. But if we are going to tinker with the mucous membrane only, and with the things that we can see inside the nostril only, of course we should not do this class of work. It is delicate, careful, big and major surgery; it is surgery that only surgeons should do, and unless we become surgeons we ought not do it; but it belongs to us just the same, I believe.

Dr. L. D. Brose, Evansville: I think Dr. Beck's paper was very timely indeed. This is a subject that interests us very much. I have had personal experience with a case of goiter, which proved to me the interest we should take in those cases. In this case the patient had a very large goiter, involving both lobes, with pressure on the pneumogastric nerve. She had very severe attacks of dyspnea. The general surgeon who operated did so without a preliminary tracheotomy, and the result was that the patient died on the table. The anesthetic was ether, and was given by a very capable anesthetist. He told me he never gave an anesthetic to a patient in whom there was such lack of aeration as in that case. I am sure if any laryngologist had that case to treat the operation would have been more skilfully performed than it was by that general surgeon. Tracheotomy is often needed as a preliminary operation in these cases of goiter, and it can be done very easily under a local anesthetic. If done in an emergency, with the lobes of the thyroid split, covering most of the trachea, it is very difficult indeed, and I do not believe Jackson would advocate his method in those cases, because it requires very careful dissection to avoid a terrific hemorrhage.

Dr. J. R. Newcomb, Indianapolis: I would like to ask Dr. Beck, in relation to border-line surgery, if it is within the field of the ophthalmologist to interfere surgically in cases of brain abscess or brain tumor? I know there are some men who believe that that branch of brain surgery should be done by the eye men, and I would like to have Dr. Beck's views on the subject. I think it might be all right in a larger city, but I very much doubt the advisability of an eye surgeon in a smaller town undertaking an operation on the brain because he finds choked disk in the eye, any more than I would expect him to undertake the operative treatment of a case of nephritis on account of the retinal condition. I would like to ask Dr. Beck if he considers that a border-line which should be stepped over by the ophthalmologist?

Dr. Joseph C. Beck (closing the discussion): Dr. Newcomb's question brings up a very important point, and I have heard lots of discussion on it. There is no need for the ophthalmologist, except that he makes a specialty in his field. I am in the advance. I speak for the enlargement of the specialty, and developing special fields within specialties. If a man is an ophthalmologist, and at the same time has the surgical training in brain surgery, or head and neck surgery, and makes the diagnosis from the fundus findings of an abscess or brain tumor, he could operate it. If he is simply a diagnostician of the fundi — if that is his specialty — he is not the one to operate. Dr. Newcomb facetiously referred to nephritis and optic changes. I have nothing to say in answer to this except that no one would treat a nephritis just because he found an albuminuric retinitis.

But I feel that anything within the field of your training in the work should be done. An ophthalmologist has just as much right to open a cranial cavity and remove the tumor present as anyone else, if he has the proper training for such work. Pretty soon every man who wants to do operative work will have to show evidence of the proper training, and I think it will be best for the profession as well as for humanity.

Dr. Brose brought up the question of goiter and the great danger of hemorrhage in these cases. These cases are not operated on until a Roentgen-ray picture is taken. These patients always have difficulty in breathing, and that should make a surgeon look out for collapse. These patients are also put to sleep with the face down, lying on the side, and operated from below. In my experience tracheotomy in goiter is a very rare operation.

Dr. Barnhill referred to Europe. I have been in practice for fifteen years and have never gone to Europe. I can find plenty to learn in the United States, and I can read the European literature. I think what Dr. Barnhill said about going into the dissecting room and developing technic is in the right line.

The reason I said border-line instead of *our* surgery is that I am satisfied to progress slowly, and we have to recognize the senior surgeons in this regard.

Reference was made in the discussion to Dr. Hertogle's ideas. They are full of speculation upon the internal secretions and the rôle they play. Nothing definite is known.

My operation on the hypophysis is the Jansen operation on the sphenoid. It is the one he recommends for opening the sphenoid through the antrum, but he has never advised it for reaching to the hypophysis. That is just one step further.

The treatment of tuberculosis of the glands by the Roentgen ray has been a disappointment to me. The patients come back for further treatment because the focus has not been thoroughly removed.

SOME OCULAR TUMORS AND THEIR LESSONS *

F. C. Heath, M.D.
INDIANAPOLIS

In 1901 I reported to the Marion County Medical Society two cases of the somewhat rare malignant tumor, glioma of the retina, found only in children, generally before the fifth year, one of these patients dying from recurrence of the tumor a few months after operation, the other living with no evidence of recurrence four and a half years after enucleation. As these tumors usually recur inside of three years, if at all, and unoperated cases die, the latter patient was saved by the timely and complete removal of the growth.

Unfortunately we are unable to follow the after-history of many of our cases, especially those occurring in our clinics. This paper will, therefore, be confined to a few seen in private practice that could be followed up completely and that represent different types of tumor and so give a variety of experience.

Case 1.—Mr. R., aged about 40, seen June 3, 1910, tumor at edge of right cornea, inner side. This tumor I removed completely with a sharp knife, shaving off the growth and cauterizing the base. There was good sight in the eye, which has continued to the present time, with no evidence of recurrence, although the tumor was pronounced malignant by the pathologist, the late Dr. Helen Knabe, who reported as follows:

"The microscopical examination of the specimen of tissue taken from the eye of Mr. R. shows the growth to be of a malignant nature. A small part of the growth consists of granulation tissue, caused, no doubt, by the previous cauterization, but the bulk of the specimen is composed of squamous epithelium. The arrangement of the cells is atypical and some of them approach the columnar type, the presence of epithelial pearls, however, gives to this growth the character of a 'squamous epithelioma.'"

Case 2.—Mr. L., aged 50, history of injury to eye, followed by severe pain and inflammation; tension much increased, sight destroyed. Eye enucleated March 17, 1906, and submitted for pathological examination to Dr. W. N. Sharp, who reported that it contained a round-celled sarcoma of the choroid, and the beautifully prepared specimen was shown to the Indianapolis Medical Society. Eight years have elapsed with no signs of recurrence, and this patient is living a very active life, apparently in the best of health.

Case 3.—Mr. A., a farmer, aged 45, first consulted me Dec. 22, 1909, for a scum over the right eye; duration two months, little pain occasionally, no redness in eyeball, vision 2/200. Ophthalmoscope showed detachment of retina, temporal side, it being impossible to tell whether it was an ordinary detachment with liquid behind the retina, or from a tumor pushing the membrane forward, tension normal and no wave detected on motion of eye. Expectant treatment was given, mainly potassium iodid. He returned June 27, 1911, with eye red and painful, tension high, lens hazy, pupil dilated, anterior chamber shallow, vision abol-

* Read before the Indiana State Medical Association, Lafayette, Sept. 24, 1914.

ished, not even light perception remaining. This made it practically certain that the eye contained a tumor. Assisted by Dr. Beverland, I removed the ball two days later and submitted it to Dr. Knabe, who reported verbally that it was a sarcoma of the choroid. The specimen and written report were probably in the doctor's office at the time of her death. I neglected to inquire for them. This man is in excellent health with no signs of recurrence after nearly three years.

Different observers have reported varying percentages of recurrence in sarcoma of the choroid, the highest being nearly 60 per cent., one-third are local and general, two-thirds metastatic. After three years they seldom return, although one has been noted as late as eleven years.

Optic nerve tumors, particularly primary extradural growths, are very rare, but eighteen having been reported, according to Ball. The following case is believed to be of that nature.

Case 4.—H. G., a boy, aged 4, was brought to my office, Dec. 23, 1909, with the left eye bulging forward very markedly. The eye was blind and ophthalmoscope revealed optic neuritis and retinitis. The history given was that the exophthalmos had been slowly developing for the past nine months, but the sight seemed to have been lost just recently. There was no pain in the eye, no redness, and the tension was normal.

As the eye was blind the Krönlein operation of removing bone to get back of the ball was not indicated, the simpler procedure of enucleation of ball and removal of growth probably causing the exophthalmos being preferable. This I proceeded to do December 27, with the assistance of Dr. C. C. Campbell. After enucleating the eye, I dissected out the growth, cutting off the optic nerve as far back as possible. There was a great deal of hemorrhage, but it was controlled by pressure. The growth and ball were sent to Dr. Knabe, who thus reported:

"The tumor is an alveolar sarcoma, starting from the outer coverings of the optic nerve. It has a well-defined fibrous network. Cells are round and rather small. These small round-celled sarcomata are usually of very rapid growth."

Some authorities speak of these tumors as having a low malignancy, causing neither glandular enlargement nor metastasis, the exophthalmos being the most prominent symptom and the loss of vision slower than in intradural growths. This type usually begins before the age of ten years. Over four years have gone by in this case without evidence of recurrence.

Case 5.—Mr. M., aged about 60, was seen early in 1907. This man had an epithelioma, which had destroyed a portion of the nose, extended into the right eye, rendering it blind, and evidently involving all the tissues of the orbit. Pain was intense.

With the assistance of Drs. Noble and Lohrmann, I operated at Deaconess Hospital, Jan. 3, 1907, not only removing the eye but all the contents of the orbit, and also the lids, curetting the bony walls and cauterizing these as well as the wounds made in cutting off the lids. Dr. Cole followed this up with Roentgen-ray treatment for some time. Patient died two years later from extension inside the nose, there being no recurrence in the orbit. It was thought that the operation and the Roentgen-ray treatment prolonged the patient's life and gave him much relief.

Case 6.—Mrs. K., aged 66, was seen Dec. 12, 1911. The left eye had been blind for many years, had been growing big for over a year, was now very large, red and hard, tension greatly increased, severe pain in eye and head. Enucleation advised. Two weeks later symptoms being still worse, pain unbearable, she consented to go to Deaconess Hospital, where I removed the eyeball and contents of the orbit, with the valuable assistance of Dr. W. F. Hughes. In this case, as the lids were not apparently involved, they were not touched, but the orbit was thoroughly evacuated, curetted and cauterized. When this patient was exhibited to the Indianapolis Medical Society, after healing had occurred, a teacher of surgery of the Indiana University School of Medicine told me, as we were leaving the society rooms, he would give my patient about six months to live. She is still alive and in good health after more than two years, although melanotic sarcomata are usually very malignant and such was the nature of this case, as shown by this report of Dr. Alburger:

"Sections through the globe and also of the orbital tissue show a general condition of necrosis and dense infiltration with lymphocytes and leukocytes, together with a new growth made up of spindle cells with an admixture of large pigment-bearing cells. I believe the latter element to be sarcomatous; diagnosis, panophthalmitis and melanotic sarcoma."

Attention is called to the thorough removal of tumor and cauterizing in Case 1, the cutting of optic nerves as far back as possible in Cases 2, 3 and 4, and the thorough evacuation of orbits, curetting and cauterizing in Cases 5 and 6, and these cases are believed to illustrate the advantages of timely and thorough operation. Do they not also suggest the possibility that the prognosis after such operations may be more favorable than sometimes supposed?

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DISCUSSION

Dr. T. C. Hood, Indianapolis: Tumors of the eyeball are not of unusual occurrence, and this is due perhaps as much as anything to the fact that two out of the three varieties of embryonic tissue enter into the composition of the structures of the eye, and these two, the epiblast and mesoblast, are the ones which in later life give rise to most tumors, both benign and malignant. Fortunately, the globe is so placed in the human anatomy that, by reason of this situation and its pupillary window, it is more open to palpation and inspection than are many other organs of the body; therefore the early diagnosis of new growths in and about the eyeball presents little difficulty. Their early removal is the only means, as emphasized by Dr. Heath, of conserving the sight, and often, as in the case of malignant growths, of saving life. The difficulty about these cases is that we do not always see them in the early stages. The choroid coat and its correlated structures, the ciliary processes and iris, together with the retina, give rise oftenest to those growths which are most destructive, and these interior growths, which occur in adults and the elderly (namely, the sarcomas), usually produce disturbances of vision and other symptoms which attract the subject's attention to the eye rather early, and if he seeks relief promptly life often can be saved by removal of the affected globe. In the case of gliomas of the retina. however, the case is different. These occur in young children, and the blindness which they cause often escapes notice by the subject and the parent until the growth has extended back along the nerve into the orbit, and even to the brain. The removal of the globe at this stage, even with all the contents of the orbit, almost invariably is followed by prompt recurrence of the malignant growth, and death from pain and exhaustion. If these little patients are to be saved from death, the diagnosis must be made in the early course of the disease and the globe enucleated before the nerve and the structures behind the ball have been invaded. The yellowish-gray reflex which can be seen in the pupil without the aid of a lens in the first weeks of the trouble, together with a slight rise in the tension of the globe, and the loss of sight, are about the only early signs of this insidious disease.

The following case which occurred in my practice recently is an illustration of the effectiveness of the early diagnosis and prompt removal: (Specimen shown.)

Frank S., aged 4½ years, was brought to me Oct. 16, 1913. Six weeks previously he had received a blow over the outer canthus of the left eye, causing a small hemorrhage into the anterior chamber and under the conjunctiva on the temporal side of the ball, as reported by the family physician, Dr. Gill of Franklin. The parents observed at that time that the eye was blind and naturally attributed the blindness to the injury.

The eye was normal in appearance, with the following exceptions: Pupil round, but partially dilated, and responded to light slowly and imperfectly; tension, plus one; typical yellow reflex from the pupil. Ophthalmoscope showed aqueous and lens clear. A tumor could be plainly seen occupying a considerable portion of the vitreous chamber and obstructing completely any view of the fundus. The right eye seemed normal in every respect.

A diagnosis of glioma was confirmed by another oculist. Enucleation was advised and accepted. Eyeball removed the following day. Healing prompt and uneventful. Dec. 1, 1913, an artificial eye was placed and worn by the child with comfort and pride. I saw the little patient again on June 15 of this year. The socket was smooth and he was still wearing the glass eye. One week ago the father reported the boy well and with no sign of a return of the tumor. The affected globe was hardened, sectioned and mounted by Dr. Sharp, and presents, as you see, a very pretty and typical example of the gliomatous growth.

Dr. F. M. Ruby, Union City: One point in regard to Dr. Hood's discussion: So many of these patients, especially the children, who are brought with these growths, will say that they have been blind ever since an injury. The point has come up several times in my cases, and those that I have seen, in which, working backwards from patients who have been blind afterwards, we have noticed the remarkable ease with which they bumped their faces and heads, receiving blows on that side. On seeing these patients following the so-called recovery, it is always well to examine as to the presence of a tumor.

Dr. Albert E. Bulson, Jr., Fort Wayne: It strikes me that a very guarded prognosis should be given in these cases, not only as regards recurrence, but as concerns metastases. I have had the experience of seeing several cases of intra-ocular sarcoma during the past twenty-three years. The majority of those have been melanotic sarcoma of the choroid, and every one of them is dead now. The majority of them died within eighteen months. Although I enucleated the eye, none of the cases had recurrence in the orbit. All of them have died of metastases, generally in the liver. So that it strikes me that in these cases of sarcoma of the choroid, as well as glioma of the retina, we should be very guarded in the prognosis. I would enter the same caution concerning Dr. Hood's case, which has gone less than a year since enucleation. If you examine the specimen carefully you will find the optic nerve affected, and I think that sections will show that the neo-

plasm has extended beyond the orbit. There are a few cases of glioma that have recovered, but they are very few and far between. About fifteen years ago Dr. Thompson of Indianapolis presented a paper before the American Medical Association in which he reported quite a large number of cases of glioma of the retina. It so happened that I had seen two or three of those cases, in addition to two or three in my own practice. I showed four specimens of glioma of the retina in the collection of intra-ocular tumors that was presented by Dr. Würdemann at Atlantic City some years ago, and at that time the remark was made that Indiana must be a fertile field for glioma of the retina. At that time all of the patients were dead.

In this connection I wish also to emphasize what Dr. Heath has so aptly stated concerning the necessity of giving these patients the advantage of operative measures. In my judgment anything that will help the patient, whether operation or not, should be tried. The patient is entitled to the most thorough operative treatment, if it holds out the slightest hope of even prolonging life.

I also wish to emphasize the point of having a Wassermann made in these cases, because of the fact that not infrequently when you suspect the presence of a malignant growth you may have a tumor to deal with which will disappear under the influence of antisyphilitic treatment.

Dr. L. D. Brose, Evansville: My experience coincides with Dr. Bulson's in the cases of glioma that have come under my observation. I can recall two cases, one of which was very unusual, occurring in a very young child. In this case both of the eyes were affected. Although the eyes were enucleated, the patient died. In the second case enucleation was also performed, but the patient died.

But my experience with sarcoma has been a little more hopeful than Dr. Bulson's. I remember one case, the wife of a farmer living in Kentucky. She had gone to another oculist, who said that the eye could not be removed, because she could not wear an artificial eye after the extensive operation that would be required. She objected to that. I said I thought I could remove the eye and save the orbital contents so that she could wear an artificial eye. This happened fifteen years ago and she is still living. It is an unusual thing to have a case of melanotic sarcoma (which was the type of growth in this case) recover.

Dr. J. Maurer, Marion: I would like to ask Dr. Heath if it is not possible to have a sarcoma within the orbit and still have normal tension present. I was taught that it was impossible to have a malignant growth within the eyeball and have normal tension, and I feel, like Dr. Bulson, that if we have normal tension and some growth in the eye, I would be sure to make a Wassermann first, to see if some other condition was not causing trouble which would clear up with appropriate treatment. I am asking for information.

Dr. Heath (closing the discussion): Answering Dr. Maurer's question: In the early stages, taking the tension by the old method, with the fingers, we have thought that it was not increased perceptibly. Possibly if we had used the tonometer on some of those patients—probably not very early, but sooner or later—we would have found increased tension present. In my paper I mentioned the case of a woman who, when she came back the second time, showed markedly increased tension, which had not been present to such an extent on the occasion of her first visit.

Dr. Bulson: Does not the degenerative disturbance often lower the tension?

Dr. Heath: Perhaps so, in the early stage.

Dr. Heath: The only other point I wish to mention was that I thought, from the remarks of Dr. Bulson, that possibly my paper was misunderstood regarding the question of prognosis. I do not wish to convey the idea that the prognosis is not grave in these cases. Of course it is. Not only as to the growth in the orbit, but from metastases. The point I wished to bring out was that possibly the grave side has been overemphasized, and we have been in the habit of looking upon those cases as hopeless. So I want to emphasize the fact, and show that in some of these cases the prognosis has not been quite as grave as sometimes supposed.

As regards glioma, the two cases I mentioned are the only ones that I have seen in my practice of twenty-four years. One of those had a recurrence followed by death in a very short time after the operation. The other was living a number of years after the operation.

EFFECTS OF LIGHT UPON THE EYE*

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No organ outside those directly connected with the vital functions contributes more to the development of the potentialities of the individual than the eye. It rarely receives consideration except when the symptoms of fatigue or reduced visual acuity are manifest.

Eclipse blindness, snow blindness, ophthalmia electrica, lightning cataract and glass workers' cataract are familiar illustrations to the oculist of the harmful effects of bright light. Many think other pathological conditions are due to defective illumination which has been acting as

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an etiological factor, probably extending over a long period of time.

Ordinary sunlight may be split into its component parts, which differ from each other in wave lengths. This difference of wave length includes various forces of energy as heat, light, in the narrower sense, and chemical action. Those of longest wave length cause a sensation of heat; those of intermediate length, light proper; while those of shortest wave length tend to induce chemical change. Mathematically this physical series is distinct and uniform, physiologically, wide variations are shown depending upon the sensory organs.

When light in the narrower sense is broken into its component parts by the ordinary spectroscope we get the pure colors: red, orange, yellow, green, blue, indigo and violet.

The visual spectrum includes approximately the wave lengths from 400 microns at the violet to 700 microns at the red end. Wave lengths greater than 700 microns produce the sensation of heat, while those less than 400, commonly known as ultra-violet, actinic or chemical rays, are powerful agents in causing chemical action. However, the visible spectrum is not limited to wave lengths between 400 and 700 microns, but contains both infra-red and ultra-violet rays in varying proportions correspondingly more numerous at the ends of the series. The actinic effect is probably best demonstrated by the photographic film.

The character of wave lengths of the rays given out by the different artificial lights shows distinct variations. All show a greater or less number of ultra-violet or actinic rays. A petroleum lamp with an ordinary glass globe gives a spectrum from 350 to 600 microns; an arc lamp with a clear globe from 300 to 600 microns; without a globe from 230 to 600 microns and the Schott uviol mercury vapor lamp from 250 to 550 microns, a light rich in ultra-violet and poor in infra-red. Whether the chemical rays produce any harmful results on the structure of the sound eye or are absorbed by the media without injury, are subjects not fully settled by investigators. The aqueous seems to absorb few ultra-violet but is very active in absorbing infra-red or heat rays, thereby protecting the deeper structure in a great measure from the effect of exposure to extreme heat. All media are permeable to rays between wave lengths of 400 to 650 microns. The cornea absorbs wave lengths less than 300, while the lens cuts off those of less than 350. The limit of absorption of the vitreous seems to be about 300 microns.

Since the lens is the most potent absorber of ultra-violet rays, the effect upon this structure is a subject of importance. Experimental work on the eyes of rabbits with the mercury vapor lamp, which is poor in heat rays but rich in chemical rays, shows no opacification ophthalmoscopically; but a microscopical examination reveals distinct changes in the cells of the anterior capsule. Hess claims that the interposition of a glass which absorbs wave lengths less than 300 microns prevents these microscopic changes. Many investigators think that these results point out the etiological factor in glass workers' cataract. Prudence certainly suggests protecting glasses for eyes constantly exposed to bright lights, especially those rich in chemical rays. Exposure of the unprotected eye to the vapor lamps, vast surfaces of snow, naked arc lights and oxyacetylene welders, give as a first effect an intense reaction in the conjunctiva, after a characteristic latent period of a few hours. That this irritation is due to the ultra-violet rays below 300 microns in length is shown by the fact that it is prevented when the eye is protected by ordinary glass, which has the quality of absorbing these rays. Birch Hirschfield has reported cases of animal experimentation in which definite changes were found in the retina following exposure to these actinic rays. Such an effect is intensified in the apathic eye. Much work has been done to make a glass which will absorb all rays with wave lengths less than 400 microns without affecting the quantity of light. Many such glasses have been placed upon the market, such as euphos, amber, okopos, etc.

Until recent years the problem of the lighting engineer has been to get the maximum output at the minimum cost. The chief results of bad lighting systems show in a loss of efficiency, immediate and remote, and asthenopia.

From the lighting engineers, or physical side, the greater amount of light the better; but from the ophthalmological side, such a view is a fallacy.

Practically all lighting systems use daylight, direct or indirect sources, or a combination of two or more of these. Proper diffusion, with sufficient intensity to give maximum details, seems to be the goal, from the viewpoint of the comfort and the welfare of the eye.

A few years ago a number of American oculists, recognizing the fact that the welfare of the eye was being only secondarily considered in lighting plans, and realizing that this phase of the subject should be given first consideration, brought the subject up before the Ameri-

can Medical Association, which appointed a committee to study the effect of different lighting systems upon the eye.

Mr. Ferree of Bryn Mawr College, a member of the committee, has undertaken to determine, (1) the lighting condition that gives the highest level of visual efficiency; (2) the conditions that give the least loss of efficiency for continued work; (3) the conditions that cause the least discomfort.

He has done much work to devise tests and apply them to determine especially the effect of several hours' work upon the eye, in regard to the loss of efficiency for continued application and the minimum discomfort under the different systems of illumination. The field has proved to be a very extensive one, which will require a prolonged, painstaking investigation. Up to the present time, he has only been able to give partial reports of his work.

In a room properly illuminated by daylight we have the ideal, after which all lighting systems should be patterned. Daylight is well described by Ferree as having been widely diffused before it reaches our windows or skylights, by innumerable reflections, and the windows and skylights acting themselves as sources, have a broad area and low intrinsic brilliancy, all of which features contribute toward giving the ideal condition of distribution, namely, that the visual field shall be uniformly illuminated and that there shall be no extremes of surface brightness. From the above characterization it is evident that the indirect system in which the illumination is the result of reflection from concealed sources of light more closely resembles daylight and gives a much better diffusion than is possible with either of the other systems.

In the direct lighting system the light passes directly to the place of work. No attempt is made for diffusion of light. The semi-indirect is an attempted combination of the direct and indirect by having a translucent reflector between the light source and the eye. The amount of light transmitted directly to the eye depends upon the density of the reflector.

A set of charts has been prepared by Ferree from a rather large number of experiments showing the eye's loss of efficiency for a period of work under each of these four systems of illumination. An inspection of the charts shows the great disadvantage under which the eye is placed in an illumination from the direct or semi-indirect system. The loss of efficiency seems to be due chiefly to the muscular apparatus, as the response of the retina to light stimuli is subject to only slight change. This fatigue of the muscles is thought to be due to the tendency for the eye to fix and accommodate on the source instead of the printed page under consideration. This powerful stimulus is only overcome by constant expenditure of nerve energy and leads to spasmodic contraction of the muscles with the resultant fatigue and disturbance of the clearness of vision.

The spasmodic action of the intra- and extra-ocular muscles as a result of their repeated attempts to regulate the quantity of light entering the pupil is probably a large factor in the eye strain from faulty illumination.

It is generally conceded that the ordinary harmful effects of bright light usually are due to the visible rays of the spectrum. In insufficient illumination the strain is often due to the excessive accommodation and convergence in an effort to focus nearer the eye.

Lancaster suggested that strong light falling obliquely upon the eye, striking the periphery of the retina which has not the power of retinal adaptation for varying intensities, produces active irritation with the resulting retinal congestion.

It is pretty well established that reflected light from below is more harmful to the eye than from other positions, consequently the ideal must be a large source of light, of low intrinsic brilliancy, as in the large windows for daylight, and a reflected light from a lighted ceiling, by the indirect method.

The different artificial lights as compared to daylight seem to have a more rapid decomposing effect upon the visual purple, thereby causing increased activity of the controlling mechanism of the eye. In the spectra of artificial illuminants there is a much greater corresponding amount of energy toward the red end than in that of solar light.

As described above, the ultra-violet rays are mainly absorbed by the conjunctiva, cornea and lens, consequently the harmful effects are spent on these structures, usually in the order named, while the infra-red, or heat rays, are chiefly absorbed by the liquid media and retina, with resulting possibility of injury to the retinal tissue. However, the vast majority of cases show subjective symptoms, such as a conjunctival irritation, asthenopia, and blurring of vision. To determine the causal factor of these ocular symptoms in defective illumination, the investigation usually proceeds along three distinct lines, namely: (a) quantity, (b) quality, (c) distribution.

With satisfactory quality and diffusion, the amount of light may vary within wide limits

with no immediate or remote injurious effects. This control of the intensity is accomplished by the involuntary variations in the size of the pupil, assisted by the lids and brows. However, the rapid variations of intensity from the flickering light quickly produces fatigue of these structures. The quality of wave length has not been definitely proved to have immediate harmful effects, although many investigators feel that it is probably a factor.

In the prophylaxis of eye strain from defective illumination, the distribution of light is a very important item. Direct rays from a small source of light of high intrinsic brilliancy are very uncomfortable, immediately and rapidly reducing the efficiency as well. The glare of reflections from glazed surfaces below the eye is almost equally detrimental.

In daylight and the indirect system the retina seems to be able to overcome wide variations of intensity without loss of efficiency. Contrary to the general impression that slightly colored light is better for seeing purposes, tests seem to indicate that the eye loses less in efficiency in white light.

Experimentation seems to show quite definitely that with the diffusion effects secured from most lighting systems too much light is used for the welfare of the eye.

The rather prevailing idea that the kerosene lamp is more comfortable to the eye than the modern sources of illumination is probably due to the low intrinsic brilliancy and the fact that it is usually near the level of the eye.

The greatest difficulty which oculists meet is in not having definite tests for determining the effects a given illumination has upon the eye. Some means must be devised to test the remote effects of defective illumination. A standard for the most wholesome effects both severally and collectively of the amount, color, intrinsic brilliancy, direction and diffusion upon the normal eye, immediately and remotely, is needed to secure the ideal light for the welfare of the eye.

In conclusion it may be said that while it cannot be positively proved that pathologic ocular conditions result from exposure to intense heat and sources of high intrinsic brilliancy with a large percentage of ultra-violet rays, clinical experience corroborates animal experimentation along this line and calls for protection for eyes exposed to such conditions. The increase of artificial illumination often produces distinctly harmful effects upon the eyes and demands a closer cooperation between lighting engineers and oculists for the standardization of lighting systems, primarily on the basis of the effect upon the eye.

DISCUSSION

Dr. Eldridge M. Shanklin, Hammond: I think it is indeed fortunate to have a discussion on this subject at this time, because the literature is very much lacking in practical discussions of the lighting question. The best proof that our present-day lighting systems are not meeting the requirements exactly is the fact that we are constantly being confronted by new systems brought out by the lighting engineers. There are a number of sides to this question of the effect of light upon the eye, but to me the most interesting side is the traumatic effect, if you please, of extreme light upon the eyes. Take, for example, the effect of the light coming from molten metal at different degrees upon the eyes. In my work in the steel district of Indiana I have a great number of those cases, and I believe it has been established that the light from the strongest heat which the eye can bear without much harm is 2,800 F. In the open hearth furnace steel process the men all wear cobalt blue glasses. Occasionally we have a case where a workman will be passing the open hearth and stoop down and look in, just out of curiosity, perhaps. I have one case in mind where a man did that. The heat was 2,600 F. He claims to have absolutely lost the sight of one eye as the result. How are you going to find out if he will receive such an injury in that way? I have yet to find a single instance where there was any pathological change apparent in the eyeball. The fundus showed nothing in the case referred to, and yet the man declared that he had practically lost the sight of his eye.

The increasing use of the oxyacetylene process—whether in cutting metal or welding—has also increased the number of injuries to the eye from extreme light. We have, of course, a number of amateur welders, if you please; fellows who buy a tank of oxygen and imagine they can go into the welding business (because the profits are very large), and we have a number of injuries from that source. Of course the only safe thing for a man who uses the oxyacetylene method is to use the triple glass—I think two layers of cobalt blue with an interposition of the red lens. But, in addition to that, he must use a metal helmet, if he protects his eyes as thoroughly as he should.

So I say that the lighting question—not alone the light by which we work, but the occupational light, if I may use the term—has come to be a great question, and I think it is indeed well worthy of our discussion.

Dr. Hughes (closing the discussion): I have nothing to say except to thank Dr. Shanklin for his discussion, the members for their attention, and the President.

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EDITORIALS

THE VACATION PERIOD

Everyone is better for an occasional change of scene and environment. To stick at one place and one kind of work continually means to get into a rut which gets deeper and deeper as time goes on. It is a realization of this fact that has led to the adoption of the vacation period by a very large proportion of the American public, and the habit of taking a week or a month off now and then is rather firmly established among people in all walks of life.

No one needs an occasional vacation more than the doctor, but no one is compelled to profit so much by absence from his work as is the doctor who often must combine duty with pleasure by taking post-graduate courses in connection with his trips to the city, or must take his medical journals and books with him for spare moments during a fishing trip.

Never has there been a greater opportunity offered the doctor for combining pleasure and profit than is offered this year by the trip to San Francisco to attend the annual session of the American Medical Association. The meetings of the A. M. A. with their papers and discussions on all subjects pertaining to medicine and surgery are always a post-graduate course, with the very latest information from the keenest observers constantly in the foreground. The session this year is held in connection with many other educational meetings and the doctor who attends has the added advantage of being in a city where one of the greatest exhibitions of all times is being held. Aside from all this there are the scenic wonders of the great West which offer recreation, pleasure and profit to all. No doctor who can afford the trip to the Pacific Coast should neglect to take advantage of this opportunity to combine so much in a single trip.

We earnestly urge our medical friends in Indiana to begin making their arrangements for this vacation which offers so much in the way of rest as well as scientific profit. To the tired doctor who wants to get away from everything pertaining to medicine, opportunity is offered for a stop-off in the mountains of Colorado on the return trip, or a sojourn in Yellowstone Park, Glacier National Park, or at any one of a dozen celebrated outing places in the great West. Fishing, hunting, sight-seeing, rest, and a post-graduate course in medicine are all offered in this one delightful trip to the Pacific Coast. The principal thing is to make up your mind to go at the right time.

The numerous railroad agents will furnish particulars as to accommodations and rates. Write the railroad agents whose addresses are given in advertising found in this issue of The Journal.

PNEUMONIA AND THE PNEUMOCOCCUS

Every year as winter slips away and spring returns our attention is drawn to pneumonia. This "Captain of the Men of Death" reaps a human harvest as great as ever. It is even thought that at present the incidence of pneumonia is actually increasing and that the mortality percentage is getting higher, that is to say, not only do more individuals contract pneumonia, but of those affected more die from it now than formerly. That the incidence and severity of pneumonia vary from year to year is known to every practitioner from personal observation. No satisfactory explanation of such variation has yet been offered. Indeed, pneumonia has always been regarded as one of the most obscure of infectious diseases, and because of this state of affairs the basis of all treatment in this disease has had to be "watchful waiting." Will the veil of mystery that has surrounded this malady finally be lifted to some extent at least? Recent developments suggest very strongly that such an occurrence is quite possible.

In the researches carried on by Cole, Dochez and their co-workers at the Rockefeller Institute some striking results have been reached. In their study of pneumococci isolated from patients affected with lobar pneumonia they have found that the majority (about 80 per cent.) of these organisms fall into distinct biological groups which have been numbered from 1 to 4. These four types of pneumococci differ in their degree of virulence for human beings. The severest forms of pneumonia result from infection with organisms of Groups

2 and 3. Infection with the pneumococcus of Group 1 is also usually quite severe, but the mortality is definitely lower than in the other two groups of cases. The lowest grade of virulence is shown by the pneumococci classified under Group 4. This group is peculiar in that it seems to be made up of a series of independent varieties of pneumococci, whereas each one of the other three groups is made up of homologous strains, i. e., all strains of pneumococci belonging to a group show identical immunological reactions which are specific for that particular group.

Comparison of the pneumococci isolated from sputum of healthy individuals with those isolated from cases of lobar pneumonia gave a very significant result. The view commonly held has been that in pneumonia the infection is autogenic, i. e., that the disease is caused by invasion of the lung by a pneumococcus carried in the mouth. It is well known that pneumococci can be isolated from the sputum of a great majority of healthy individuals, but the studies of Dochez have demonstrated that the majority (80 per cent.) of these pneumococci show immune reactions that are quite different from those of the fixed types isolated from cases of lobar pneumonia. In other words, disease-producing pneumococci and those usually found in the mouth and upper respiratory tract of healthy individuals in the majority of cases are not identical. In only about 20 per cent. of cases do there seem to be no biological differences in the strains of the organisms, and it is likely that in such a minority of instances infection is really autogenic.

Evidently our old idea as to the mode of infection in lobar pneumonia will have to be abandoned. It seems that we must now accept the view that the majority of cases of lobar pneumonia are dependent on either direct or indirect contact with a pre-existing case. Individuals who come into intimate contact with cases of lobar pneumonia may either themselves acquire the disease, or they may become infected with virulent types thereby becoming healthy carriers of disease-producing pneumococci. In the latter case they would bear a relation to lobar pneumonia analogous to that which typhoid and diphtheria carriers bear to their respective diseases. Hence the question of the epidemiology and prevention of lobar pneumonia assumes an entirely different aspect.

When we bear in mind that the goal aimed at in this investigation is to develop a specific curative serum, the success of this work concerns not only the medical world but all humanity. If there were available at present a therapeutic serum for lobar pneumonia that could give results somewhat like those obtained in epidemic meningitis or diphtheria would it not be one of the greatest life-saving remedies at our disposal? Surely it seems that the work which would lead to the successful elaboration of such a curative serum has already been well started.

THE BAKING-POWDER PROBLEM

For a number of years there has been much discussion with regard to the effects of baking powders on the health. While minor objections have been urged against all baking powders, the principal charge of unwholesomeness has been made against baking powders containing alum. This objection is based primarily on the injurious effects of large quantities of aluminum salts. To this objection the answer has been made that the process of decomposition which liberates the leavening gas when alum baking powder is used, produces an oxid of aluminum which is insoluble, and hence not injurious. For the facts in this matter to be fully understood, it must be remembered that the so-called alum now used in baking powder is not the alum used in medicine, being a sodium alum (sodium aluminum sulphate) instead of the official potassium salt. This point is held by some to be important in view of the effects of potassium salts on the system. Cream of tartar is a potassium salt, being potassium acid tartrate.

In the discussion of the baking-powder question, it must be remembered that the practical application of the facts concerns only small amounts of these salts and contemplates an occasional and not a constant use. Few people habitually consume breads made from baking powder, hence the amount of potassium introduced into the system by baking powder is unlikely to be of serious moment as regards health. Potassium salts are frequently taken as constituents of vegetable food, and yet there is no evidence that they disturb metabolism in any way. The question whether alum used in this way is injurious has been settled by the investigations of the Referee Board of Scientific Experts appointed by President Roosevelt, and its decision may be considered as coming from the court of highest authority. The investigation of this board covered a period of several years and was the most extensive single investigation ever conducted as to the healthfulness of

alum baking powders. The distinguished character and personnel of the board itself lends additional weight to its findings. The board consisted of the following men:

Dr. Ira Remsen, president of Johns Hopkins University.

Dr. Russell H. Chittenden, professor of physiological chemistry, Yale University, and director of the Sheffield Scientific School.

Dr. John H. Long, professor of chemistry in the Northwestern University Medical School.

Dr. Alonzo E. Taylor, professor of physiological chemistry, University of Pennsylvania.

Dr. Theobald Smith, professor of comparative pathology, Harvard University.

The board made the following findings:

"Aluminum compounds when used in the form of baking powders in foods have not been found to affect injuriously the nutritive value of such foods.

"Aluminum compounds when added to foods in the form of baking powders, in small quantities, have not been found to contribute any poisonous or other deleterious effect which may render the said food injurious to health. The same holds true for the amount of aluminum which may be included in the ordinary consumption of aluminum baking powders furnishing up to 150 mg. (2.31 grains) of aluminum daily.

"Aluminum compounds when added to foods in the form of baking powders, in large quantities up to 200 mg. (3.09 grains) or more per day, may provoke mild catharsis.

"Very large quantities of aluminum taken with foods in the form of baking powders usually provoke catharsis. This action of aluminum baking powders is due to the sodium sulphate which results from the reaction.

"The aluminum itself has not been found to exert any deleterious action injurious to health, beyond the production of occasional colic when very large amounts have been ingested.

"When aluminum compounds are mixed or packed with a food the quality or strength of said food has not been found to be thereby reduced, lowered or injuriously affected."

In short, the board concludes that alum baking powders are no more harmful than any other baking powders, but that it is wise to be moderate in the use of foods that are leavened with baking powder.

In Dr. Taylor's conclusions, a different aspect of the baking-powder question is brought out. It is shown that the product of all forms of baking powders is laxative, and the suggestion is made that the laxative effects of the continuous use of breads made with baking powder may be injurious. The objection applies to the cream of tartar baking powder which leaves a residue of Rochelle salts, to the phosphate baking powders which leave the phosphate of sodium and to the alum baking powders which also leave the sodium sulphate. Dr. Taylor says: "Apparently, therefore, at present at least, the use of baking powder is associated with the introduction into the alimentary tract of a certain amount of saline cathartic, the salt differing with the use of a particular type of baking powder." In connection with this objection, the amount of soluble residue left by the decomposition of the baking powder becomes of importance.

Here, again, the pertinence of the objection depends on the quantity likely to be eaten. In no case is it likely that a person would consume bread or biscuits enough to get an appreciable effect on the bowels from the laxative produced.

The criticisms with reference to the action of baking powders indicate a tendency to magnify quite incidental matters whenever they seem to favor the interest of one or other manufacturer. Thus the tartrate was at one time highly regarded because it was a product which was destroyed in the system, leaving a natural constituent of the body, that is, potassium carbonate. More recently it has been discovered that the tartrates are only partially metabolized in the system, removing the supposed advantage of the tartrate powders. On the other hand, there is a disposition to emphasize experiments tending to show the power of tartrates to affect the kidneys injuriously, although there is no evidence that such an injurious action can occur from the small quantity present in baking powders. While the objections to alum are unjustified, the physician will do well to inquire carefully into the probability of any alleged injury occurring from other forms of baking powder.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

Vacation time is approaching. What better vacation for a doctor than a trip to the Pacific Coast and attendance of the annual session of the American Medical Association along with the visit to the Panama Pacific Exposition and enjoyment of all of the scenic wonders of the great West!

Several county medical societies in Indiana have contributed to the Belgian Relief Fund. The cause is a worthy one for there are very many deserving medical men in Belgium who have not only lost all of their property and practices, but at the present time are suffering for the want of necessities.

There is a movement on foot to create an organization for internists which shall be analogous to the American College of Surgeons. If the internists do not make a better job of it than those who have organized and controlled the American College of Surgeons, then the enterprise had better "die-a-bornin'."

"Fee Splitting," as defined by J. G. Mumford in the *Clifton Medical Bulletin, (Journal of the A. M. A.)* "is graft; it is blackmail by the general practitioner; it is bribery by the guilty surgeon. Through such transactions the unscrupulous surgeon buys his patient from the unscrupulous family doctor as surely as he buys flour from the grocery."

The New York Legislature has defeated the Christian Science Bill for the exemption of Christian Science practitioners from the state law requiring those who treat diseases to be examined and licensed. Party lines were disregarded and it is very evident that there was a general recognition of the fact that Christian Science healing in the vast majority of instances is fakery of the worst sort.

In some of our English exchanges we notice that a leading concern handling radium is offering to rent tubes of radium at a price that is in keeping with a fair return on the investment. We are wondering if any of the American concerns will do likewise. The enormous expense of this new element precludes the possibility of any very extended sale to physicians except in the form of inexpensive preparations that have a radium content.

The State Board of Health has been sued for damages as a result of failure to follow up the prosecution of a man who was charged with false advertising in connection with a mineral water preparation. The board, through the attorney-general, is prepared to fight the case, and incidentally it is hoped that any failure to prosecute offenders guilty of fraudulent advertising in connection with mineral waters will be corrected by renewed action.

Every county medical society in Indiana should join the movement to have one meeting in June devoted to a consideration of cancer. The July number of The Journal will discuss the general phases of the question, and a large number of the prominent medical journals of the country will do likewise. The enterprise should stimulate the interest of the medical profession in a subject that is of great importance in our disease prevention campaign.

The federal regulations governing the sale and prescribing of opium and cocain and their derivatives is a terrible nuisance to the busy practitioner, and yet we believe that with a view to suppressing drug addictions every physician should comply with the law cheerfully. Of course, he will have to comply with the law anyway, whether he is cheerful about it or not, but we urge physicians in general to uphold the law instead of making efforts to have it repealed.

"Twilight Sleep" is now depicted in motion pictures which are receiving the attention of various civic clubs opposed to pictures that are immoral or tend to the production of immorality. The commercializing of a procedure of questionable merit, and one that possesses many elements of danger, is deserving of severe condemnation, and putting "Twilight Sleep" in moving picture entertainment gives ample opportunity for the Board of Censors for moving picture concerns to act with promptness and emphasis.

Can it be possible that there is not a single physician in Indiana who has not used radium as a therapeutic measure? From every part of the country we hear glowing reports concerning radium therapy, and while it is quite possible that there are over-zealous advocates of radium as a therapeutic measure in a variety of morbid conditions, yet there can be no doubt but that this new element is proving very efficacious in selected cases. At all events our Indiana medical profession at least should keep abreast of the times by being willing to adopt new means and measures for the relief of afflicted mankind. If the statement of the Radium Chemical Company, Pittsburgh, (principal dealers in radium in this country) is to be logically construed, we are warranted in believing that there is not a doctor in Indiana who has given radium a trial. If this is the case it is time for us to get out of our shells.

Exposing Fake Cures.—*Harper's Weekly* has been exposing fake cures, and is going to wage a fight for a national law requiring a statement on the label of "patent-medicine" preparations giving the entire contents by names, properties and proportions. It is intended that every masquerading poison shall become a household bugaboo, and that every person shall know just what proportion of cheap booze and water he gets for his dollar. *Harper's Weekly* deserves the support of all people who are interested in the suppression of fraud, and members of the medical profession in particular should give their encouragement and support. Such a periodical deserves to have help in arousing public opinion to action.

If under our laws officials at any time can be prosecuted for performing their duties, we do not wonder that they become lax. The State Board of Health is attacked in every legislature because the board has enforced the health laws. Whenever you find a legislator opposing the state board of health there you will find a man who is not satisfied to have the health laws of the state enforced. It may be that opposition comes through desire to avoid being taxed for a new schoolhouse to replace one that has been condemned, or it may be that opposition comes because the state board of health has compelled some legislators or their friends to improve the sanitary conditions about their premises. "It always makes a difference whose ox has been gored."

Don't be stingy! St. Peter never will permit you to go through the pearly gates with any money tied to your person, so separate yourself from some of the coin while you remain on this earth and make up your mind to enjoy the operation. The Great West beckons you this year—the Panama-Pacific Exposition, the most stupendous affair of its kind ever held; the wonderful scenery of the Great West and Northwest, unsurpassed in beauty and grandeur; and added to all this there is the annual session of the A. M. A. to be held in San Francisco. Travel is a great education in itself; but the trip to the Pacific Coast this year affords so many returns in recreation, pleasure and profit that no doctor can afford to miss it. A trip such as proposed is a splendid vacation, and every doctor needs a vacation at least once a year.

"NEVER BEEN TO A CONVENTION IN MY LIFE—AINT GOIN' TO START NOW!"

"WELL I'M OFF TO THE A.M.A. CONVENTION AT FRISCO—NEVER TOO OLD TO PICK UP SOME BENEFICIAL INFORMATION, YOU KNOW!"

New York City has started a war on quacks, and already nearly a hundred persons have been arrested on the charge of being fakers. The crusade is carried out through the cooperation of the County Medical Society, the Department of Commerce and Labor, and the District Attorney's office with a view to stamping out so-called medical institutions which, it is claimed, have been fleecing foreigners under the pretext of treating them for imaginary ailments. According to the police the Museum of Anatomy and some of the offices manned by quack doctors are a chain extending throughout the country—all under control of one man and form a vast organization employing numerous agents.

In connection with a campaign against "patent medicines" and medical fakery of every description, *Harper's Weekly* recently has been asked, "Why don't you say something about the pill doctors?" The response is as follows: "No layman could possibly say more about the 'pill doctors' than they have said about themselves. There has not been a day during the last ten years in which the medical profession has not been trying to cleanse itself of unworthiness, and the fight for higher standards that has been made from *within* is one that might be copied with profit by every other group in the United States, professional or industrial. . . . Of a certainty, there can be no quarrel with the efforts of the medical profession to put its house in order."

The early fly's the one to swat. It comes before the weather's hot, and sits around and files its legs, and lays at least ten million eggs, and every egg will bring a fly to drive us crazy by and by. Oh, every fly that skips our swatters will have five million sons and daughters, and countless first and second cousins, and aunts and uncles, scores of dozens, and fifty-seven billion nieces; so knock the blamed thing all to pieces. And every niece and every aunt—unless we swat them so they can't—will lay enough dodgasted eggs to fill up ten five-gallon kegs, and all these eggs, ere summer hies, will bring forth twenty trillion flies. And thus it goes, an endless chain, so all our swatting is in vain unless we do that swatting soon, in Maytime and in early June. So, men and brothers, let us rise, gird up our loins and swat the flies! And, sisters, leave your cozy bowers where you have wasted golden hours; with ardor in your souls and eyes, roll up your sleeves and swat the flies.—Walt Mason.

Our readers may remember that we have had some rather uncomplimentary things to say concerning quack sanatoriums for the treatment of drug and alcohol addictions. We have no faith in nor do we recommend institutions that are conducted by medical men who do not conduct themselves in an ethical manner and who are not members of recognized medical societies. We take it for granted that our support of men and institutions having high ideals is approved by all right-thinking doctors. Those of our readers who have drug addicts to refer to hospitals or sanatoriums have no excuse for patronizing quacks or quackish institutions. The Journal refuses the advertising of such concerns, and that is quite sufficient to condemn them. On the other hand, The Journal carries the advertising of some institutions that, as a result of investigation, are known to be trustworthy. We believe that our readers will appreciate our efforts to safeguard their interests and act accordingly at this particular time when the federal law concerning the sale of narcotics is bringing so many "dope fiends" to the physician for relief.

It was predicted that when the Harrison bill went into effect there would be a general stampede among "dope" users to secure treatment for their drug addiction, but this expectation has not fully been realized. While it is true that many drug users have been discovered through the effect of the new federal regulation, yet it would seem, from the reports of druggists, physicians and sanatoriums, that the number is far less than placed in the estimate by the sponsors for the Harrison bill. The provisions of the bill make it exceedingly difficult for the "dope fiends" to obtain drugs, for few physicians or dealers are going to run the risk of the heavy penalty that has been provided by the federal law. In the meantime, physicians are very greatly annoyed in their legitimate work by the severe exactions imposed on them in carrying out the provisions of the law. However, the medical profession as a whole is not inclined to look with disfavor on any regulation that is for the public good, and the Harrison bill, while exceedingly annoying to physicians, will have their earnest support in an endeavor to check the growth of the use of habit-forming drugs.

Fritzie Feick, who has broken all legislative records for the introduction of freak bills, has secured notoriety also in another fashion. He has devoted a large portion of his time as

a legislator to combating every health bill favored by Dr. Hurty, of the State Board of Health, and he has impudently asserted that he neither knew nor cared anything about these measures except that they were sanctioned by the doctor. That was enough for him. If the measure under consideration chanced to be one whose passage meant the saving of ten thousand human lives, Feick was to be found bitterly opposing it if it bore the brand of Hurty's approval. Viciously biased, malignly partisan, and utterly disregardful of the public interest, Feick fought with the venomous hate of a blind rattlesnake and displayed at all times a thorough willingness to sacrifice the lives and health of the people of this state if by so doing he could spite the secretary of the Indiana State Board of Health, Dr. Hurty. A man of such low-grade mentality and sinister malignity of character is a positive menace when invested with power to assist in the framing of laws, and the people of DeKalb county who are responsible for his elevation to this position he has disgraced, are richly deserving of the severest censure. For they knew what manner of man he was when they elected him. —*Fort Wayne News,* Feb. 3, 1915.

DEATHS

Josiah W. Brower, M.D., died at his home in Gilead, April 7.

Mattie Conner, wife of Dr. N. F. Conner of Redkey, died April 7.

Samuel H. Collins, M.D., of Lawrenceburg, died April 5, aged 64 years.

Aaron Morris, M.D., died April 14 at his home at Russiaville, aged 75 years.

Minerva Sweney, wife of Dr. I. F. Sweney of Milton, passed away April 9, aged 75.

Joseph D. Larimore, M.D., of Muncie, (retired) passed away April 28, aged 79 years.

John G. Lewis, M.D., of Rushville, died April 17, from pneumonia, aged 52 years.

Essie Muncie, wife of Dr. Henry L. Muncie of Brazil, died very suddenly April 7, aged 27 years.

Mrs. Mary Ellen Hopwood, widow of Dr. William C. Hopwood of Greencastle, died April 10 of apoplexy.

Amos T. Davis, M.D., formerly of Edinburg, died very suddenly April 12 at the Military Home at Marion, aged 79 years.

Jacob W. Clark, M.D., of Washington, Ind., died April 24 at the home of his brother in Portland, Ore., where he had gone in the search of health. Death was caused from pulmonary tuberculosis. Dr. Clark was born in Daviess County, Indiana, Feb. 12, 1842, attended the county schools, read medicine under Dr. John S. Mitchell, and graduated in medicine at the Louisville Medical College in 1870. He was a member of the Daviess County Medical Society, and the Indiana State Medical Association.

Luther Johnson, M.D., of Bourbon, died April 17 from acute indigestion, aged 79 years. He was born at Findley, Ohio, in 1836, taught school after completing his common school education, enlisted in Company D, Ninth Infantry, wounded at Battle of Shiloh, honorably discharged; graduated from Rush Medical College in Class of 1866; commenced the practice of medicine at Bourbon the same year and continued in his profession at that place until his death. Dr. Johnson was a member of the Marshall County Medical Society and the Indiana State Medical Association.

James H. Ford, M.D., died at his home in Indianapolis April 21, aged 67 years. He had been in ill health for a couple of years, but his condition became serious only a few weeks preceding his death. Dr. Ford was born at Wabash, Ind., in 1848, graduated from old Indiana Medical College in 1875, and continued his studies at the University of Michigan. He first practiced medicine at Wabash but later located at Indianapolis where he continued to practice for the past twenty-one years. For the past forty years he had been in the employ of the Big Four railroad company, and at the time of his death held the position of chief surgeon of the company; he was a prominent member of the faculty of the Indiana University School of Medicine, and for the past ten years served as emeritus professor of surgery in that school. Dr. Ford was prominent in the affairs of the International Association of Railway Surgeons and served two terms

as president of that organization; had served two years as president of the Indianapolis Board of Health, and was an ex-president of the Indiana State Medical Association. His presence will be greatly missed in medical circles in Indianapolis as well as all over the state.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Dr. Louis H. Segar has returned to Indianapolis after spending two years in children's hospitals in New York and Boston.

While members of the family were away burglars entered the home of Dr. Edward C. Helwig, Indianapolis, and stole jewelry valued at $500.

Dr. T. C. Kennedy, who was sick at St. Vincent's Hospital owing to an infection caused by a wound sustained during a surgical operation, has recovered.

A thief entered the office of Dr. J. C. Stephenson, Indianapolis, when the doctor was in his yard at the rear of the office, and took the doctor's watch from his chain, leaving the chain in the waistcoat.

An additional gift of $10,000 has been made by Dr. and Mrs. Robert W. Long to the Long Memorial Hospital. This money is to be used in erecting a home for the nurses and putting the grounds in condition. This recent gift raises the total amount donated by Dr. and Mrs. Long to $240,000.

The City Board of Health has signed a contract with the Indiana Dental College, whereby schoolchildren whose parents are unable to afford it will receive the proper attention from the dental college. School nurses will take the children to and from the clinic and see that they receive all necessary care.

The Nu Sigma Nu medical fraternity of the Indiana University gave a banquet for both active and alumni branches at the Claypool Hotel, Indianapolis, April 10. Dr. J. A. McDonald presided as toastmaster and addresses were made by Drs. J. F. Barnhill, W. D. Gatch, Homer Woolery and E. O. Lindemuth.

Twelve new interns have been appointed for the city hospital, Indianapolis. Eight of the appointees will graduate in June from the Indiana University School of Medicine and the other four will graduate the same month from Rush Medical College, Chicago. Chester A. Stayton from the Indiana University School of Medicine took first place among the thirty applicants in the examination for places.

According to an opinion rendered by Judge Moll of the Superior Court, Indianapolis, the statute under which insanity proceedings are held by justices of the peace is unconstitutional. Judge Moll based his opinion on the fact that the statute does not require notice to the person said to be insane, nor does it guarantee to such person an appearance in court. After an exhaustive review of all the cases in the United States on the subject all but one hold that notice should be given the person said to be insane.

According to the annual report of the City Board of Health, Indianapolis, there were 527 deaths from tuberculosis in 1914 as against 473 in the previous year. Dr. H. C. Morgan, secretary of the board urges in his report that Marion County erect and maintain a county hospital for tuberculosis patients. The report further shows that there were 8 deaths from whooping-cough, 29 from diphtheria, 6 from measles, scarlet fever, 12, and 57 deaths from typhoid fever. During the year 1914 there was not a single death from smallpox in Indianapolis.

The open-air school system which had its beginning in Indianapolis some months ago through the efforts of the Marion County Society for the Prevention of Tuberculosis, is now to have a substantial building that will be the headquarters of the system. The house is located in a beauty spot of the Technical grounds. The place is surrounded by large trees, thus the children will be able to carry on their work hidden from the curious eyes of the public. By removing partitions making one large room of the lower floor, a half hundred pupils could be taken care of. There are now thirty pupils in one of the small open air structures and there is an extensive waiting list. It is hardly possible that all can be accommodated. Dr. Alfred Henry of the society stated that there is need of even a third open-air school.

Potter Memorial Meeting

Report of a memorial meeting held at Anti-Tuberculosis Headquarters, 203 Public Savings Bldg., Indianapolis, in honor of the memory of Dr. Theodore Potter who fell a victim to tuberculosis Feb. 8, 1915:

Feb. 9, 1915, officers and members of the Indiana Society for the Prevention of Tuberculosis and the Marion County Society for the Prevention of Tuberculosis met for the purpose of paying just tribute to the memory of Dr. Theodore Potter, a vice-president of the state society and secretary of the county society.

Dr. Alfred Henry, president of the County Anti-Tuberculosis Society acted as chairman and in explaining the purpose of the meeting spoke with great feeling of Dr. Potter's work. He pointed out that for many years prior to his death, Dr. Potter had been recognized throughout the middle west as a physician who possessed a keen insight into the social as well as the medical side of the tuberculosis problem.

The meeting served to emphasize the fact that Dr. Potter was perhaps the first Indiana physician to accept and to practice the theory that tuberculosis is a germ disease, consequently preventable. His activity which was largely responsible for the beginning of organized work against tuberculosis in Indiana as well as for the establishing of a state tuberculosis hospital, was touched on by Dr. W. T. S. Dodds, Dr. Frank B. Wynn, Dr. Edgar Kiser, Miss Mary Meyers, W. T. Thurber and others present.

His unfailing interest in the work of both the state and county anti-tuberculosis societies in both of which he held responsible offices, was brought out by those with whom he came in close and intimate contact in his daily life. He often performed the duties as vice-president of the state society and secretary of the county society at great personal sacrifice, but always with enthusiasm. He was ever ready to give the best that was in him to any problem that affected the work of these two volunteer organizations. His advice, always sought, was freely given and his helpfulness to his associates possessed so rare a quality of good cheer and efficacy that it was always in demand.

It was realized by many of his associates at the meeting, that for months prior to his death, Dr. Potter was becoming a martyr to the disease which he fought so vigorously and so effectively for a quarter of a century. The demands of his practice, which consisted largely of calls from those suffering from tuberculosis, were so insistent that the doctor put off from day to day, and from month to month, the problem of looking after his own health. Realizing, though never admitting it, that the lives of hundreds of his patients depended on his undiminished efforts in their behalf, he kept steadfastly at work, though he must have known that the very disease which he was combating so successfully in his patients, was obtaining a death grip on him.

The slow but constant inroads of the malady with which he became afflicted, coupled with the drag of his work on his physical strength, so exhausted his vitality, that, when he finally gave up and sought to repair the damage that had been done, he found his reserve power gone and there is now nothing left his former associates and friends but the pleasant memory of helpfulness and influence and the constant thought of his last formal message, "Go out and preach prevention."

It was the unanimous thought of the meeting that the sentiments above expressed, be made a part of the permanent record of the state and county anti-tuberculosis societies and that a copy be given Mrs. Potter.

W. T. Thurber,
W. T. S. Dodds,
Alfred Henry.
Committee.

GENERAL

Dr. and Mrs. J. A. Varier of South Bend, have returned from a western trip.

Dr. S. N. Hamilton of Connersville, has been very ill for the past few weeks.

Dr. H. C. Holtzendorf of Mishawaka, has been doing post-graduate work in Chicago.

The new Detroit tuberculosis hospital will accommodate 345 patients when completed.

Dr. W. L. Owen of South Bend, has been taking post-graduate work in New York.

Dr. C. C. Rayl of Monroe, who has been in poor health for the past eight months, is slowly improving.

Dr. Fred Daubenheyer, formerly of Butlerville, has located at Batesville for the practice of medicine.

The Fort Wayne Medical Society has contributed $25 to the relief of the Belgian physicians.

Dr. W. P. Parr, for many years a practicing physician of Lebanon, Ind., died recently at his home at Wichita, Kan.

Dr. James M. Dinnen of Fort Wayne, has been reappointed a member of the Indiana State Board of Health.

The Indiana State Nurses' Association held its thirteenth semi-annual convention at Terre Haute April 28, 29 and 30.

Dr. T. Henry Davis of Richmond, has retired after twenty-two years of active service on the State Board of Health.

No man is allowed to go to the front in Austria without first being vaccinated against typhoid, variola, and cholera.

A testimonial banquet was given in honor of the eighty-fifth birthday anniversary of Dr. Abram Jacobi of New York City.

Dr. Arthur R. Simon of LaPorte, had both bones of the right arm broken while attempting to crank his automobile on April 16.

The Bartholomew County Commissioners have granted the petition asking for a new $100,000 hospital to be built at Columbus.

Dr. E. P. Masgana, formerly of Linton, has located at Vincennes and opened an office at 525 Main Street for the practice of medicine.

Dr. Charles B. Kern of LaFayette, has been appointed by Governor Ralston to succeed Dr. T. Henry Davis on the State Board of Health.

April 23 was observed as "Clean-Up Day" in Bartholomew County under the direction of Dr. James H. Morrison, county health commissioner.

The LaFayette Detention Hospital, LaFayette, was destroyed by fire in April. The loss was about $3,000 which was partly covered by insurance.

The sum of $500,000 has been appropriated by the Oregon legislature for the first building of the Department of Medicine of the University of Oregon.

The Lake County Medical Society is making a vigorous campaign for the erection of a County Tuberculosis Hospital, and the outlook is very favorable.

Dr. W. R. Hutcheson of Greencastle, has resigned as county physician of Putnam County and his place has been filled by Dr. J. V Bastin of Fillmore.

The graduating exercises of the Senior Class of the Lutheran Hospital Training School, Fort Wayne, were held May 12, at which time nine nurses received diplomas.

Dr. M. N. Thayer of Linton, has been appointed secretary of the City Board of Health to fill the place of Dr. E. Masgana who has recently located at Vincennes.

The ninety-third annual conference of the Union District Medical Society was held at Connersville April 22 with more than one hundred and fifty doctors in attendance.

Von Prowazek, the great parasitologist of Hamburg, Germany, is dead. His death was caused by typhus fever introduced by Russian prisoners. He was 39 years of age.

Eleven nurses received their diplomas at the commencement exercises of the Hope Hospital Training School, Fort Wayne, on May 5. Dr. Miles F. Porter delivered the address.

The Post-Graduate, Polyclinic and Henrotin Hospitals, of Chicago, have united, and while their locations will not be changed, they will be governed by a combined Board of Directors.

The commissioners of Boone County have appropriated $15,000 toward a county hospital. Mr. F. J. Witham, a wealthy farmer of Clinton township has offered $15,000 toward this hospital.

The Canadian Medical Association has decided to omit its annual meeting which was to have been held July 7 to 10, on account of the war, as many of their members are in service at the front.

The Twelfth District Medical Society met in Fort Wayne April 14. Dr. C. C. Rozelle of LaGrange, was elected president for the coming year, and Dr. Miles F. Porter, Jr., secretary-treasurer.

Dr. J. W. Scott of Hecla, while attending the meeting of the Twelfth District Medical Society at Fort Wayne, April 14, had both bones of the right arm broken in attempting to crank his automobile.

Newcastle has been having an epidemic of smallpox but the disease has been kept in check by an ordinance passed by the city council making vaccination compulsory for all people compelled to be in public places.

The Detroit Physicians' Business Bureau is a new adjunct to the Wayne County (Mich.) Medical Society and has been instituted for the purpose of establishing better business methods in the collection of accounts.

Dr. M. A. Armstrong of Lebanon, has located at Newell, Iowa, and left May 1 to take up his work at that place. Dr. Armstrong has been secretary of the Boone County Medical Society for a number of years.

The engagement of Dr. A. C. Bartholomew, formerly of Michigan City, but now of Van Wert, Ohio, to Miss Ruth Inez McConahy of Van Wert, has been announced. The wedding will take place in October.

The Child Welfare Exposition was held at Evansville the week of April 20. Among the speakers were Dr. Charles P. Emerson, Indianapolis; Dr. W. F. King, Indianapolis, and Dr. J. N. Hurty, Indianapolis.

Dr. Charles Bruce Kern, a homeopathic physician of LaFayette has been appointed by the governor to take the place of Dr. T. Henry Davis of Richmond on the State Board of Health. Dr. Davis' term expires May 6.

Some months ago Dr. J. E. Weller of Richmond, bruised his knee while doing some work on his farm in Florida, complications arose which developed blood poisoning and amputation of the leg was necessary to save his life.

Dr. Paul E. Bowers, who has been physician in charge of the Indiana State prison for the past four years, has been reappointed medical superintendent to the Indiana Hospital for Insane Criminals, the medical and psychiatric work of this institution having been organized by him in the years of 1911-12.

Dr. Henry E. Washburn of Clinton, has been in very poor health and has been taking treatment at St. Anthony's Hospital where he hopes to gain sufficient strength to enable him to go to Texas for the benefit of his health.

Dr. Lyman T. Gould of Rochester, who has recently finished his training at Chicago University, Rush Medical College and Cook County Hospital, has located at Fort Wayne. His offices are in the Gauntt Building. He will specialize in surgery.

Dr. B. A. Blosser of Fort Wayne, has recently located at Fremont, Ind., where he will continue to engage in the practice of medicine. Before his departure for his new location a number of his medical friends surprised him with a farewell banquet.

Dr. Fred A. Henderson of Anderson, who has graduated from the Jefferson Medical College at Philadelphia and just completed twenty-six months' service as intern at Kings County Hospital at Brooklyn, N. Y., has located in Anderson for the practice of medicine.

April 19 was observed as Public Health Day in the state of West Virginia by the proclamation of Governor Hatfield of that state. West Virginia received its idea through the suggestion of Dr. Hurty which was carried out by Governor Ralston in Disease Prevention Day in Indiana last October.

Statistics issued by the Indiana Society for the Prevention of Tuberculosis show that this state is slowly blocking the advance of this disease. There has been a gradual decline in the number of deaths in Indiana since 1910. The yearly totals for the last five years are as follows: 1910, 4,710; 1911, 4,230; 1912, 4,048; 1913, 4,108; 1914, 4,070.

The American Social Hygiene Association has been offered a prize of $1,000 by the Metropolitan Life Insurance Company to be awarded to the author of the best original pamphlet on Social Hygiene for adolescents between the ages of 12 and 16 years, approved by a committee of judges to be selected by the Association. The contest is open to all.

Dr. Nellie E. Green of Fowler, and Dr. Samuel M. Green of Dixon, Ill., were reunited in marriage April 20. This couple were mar-

ried forty-three years ago and separated soon after because of Mrs. Green's desire to continue the practice of her profession. They will reside at Fowler, and both will continue to practice medicine.

On April 5 the Huntington County Medical Society gave a birthday surprise party in honor of the eightieth birthday anniversary of Dr. W. C. Chaffee, who has practiced medicine in Huntington for the past fifty-seven years, and presented him with a box of fine cigars in token of their esteem. During the banquet which was served brief talks were made by Drs. Koontz, Wright and Shaffer, and Dr. Good, in a short address, eulogized the doctor for his lifelong work spent in the medical profession in Huntington County, and expressing the high regard and esteem in which he is held by medical profession and public as a whole.

CORRESPONDENCE

"TWILIGHT SLEEP" IN MOVING PICTURES

Michigan City, Ind., May 12, 1915.

Editor The Journal:—This afternoon and evening "Twilight Sleep" was billed to be given as a motion picture show at the Orpheum Theater.

The Medical Society, Woman's Civic Club, and the Law and Order League protested, with the result that a preliminary show was given this morning to representatives from these bodies at the suggestion of the mayor, who promises to act by the decision made by the committee which was "Immoral."

The exhibition is vile, and I would suggest that you, through the official organ of the State Medical Association, advise all Medical Societies of the fraud as well as its putridity.

Very truly yours,

Rose Alexander Bowers, M.D.

TWINS AND TRIPLETS

Kentland, March 26, 1915.

Editor The Journal:—

I have been practicing medicine four years, and have had a varied experience in obstetrics. Have had two twin births, three cases of eclampsia, both recovering, one placenta praevia marginalis, and last but not least, a triplet birth.

Patient, Mrs. M., called me with very severe bronchitis this last winter. Was pregnant at that time. No albumen but many symptoms of eclampsia. Kept her under observation until March 12, 1915, when I was called at 8:15 p. m. Found an occipito-anterior position. Bag of waters very thick and cervix completely dilated. At 9:15 the first baby, a girl weighing 6½ pounds, was born. I had delivered the mother seventeen months previous of a boy weighing 11 pounds, and remarked to the father that this baby seemed small. Further examination found the second baby, which was a breech presentation. Labor again started, and in forty-five minutes a second girl was born weighing 6¼ pounds. I thought of course that all was over, and waited patiently for the placenta to come away which it did not do in course of half an hour. Again I made an examination and found a third baby presenting in occipito-anterior position. When the head had descended I ruptured the bag of waters and a boy weighing 5¼ pounds was born. In a few minutes the placenta came away and mother came out from anesthetic and was all right. She has recovered completely, and the babies are doing nicely.

I would not have missed bringing those triplets for $500, but I would not give two cents to have another case of like character.

Our medical society, Jasper-Newton, is surely fine.

Very respectfully,

W. C. Mathews.

A WARNING TO INDIANA DOCTORS

Editor the Journal:—

We would like to have the privilege of warning the medical profession throughout the country against a young man, who at present is traveling under the name of Paul Goodman. This man is both a crook and a forger, and if possible, he should be kept under surveillance until one of his numerous victims can swear out a warrant for his arrest.

His "game" is to represent himself as a representative of the Victor Electric Company, and gain the confidence of a physician to the extent of inducing him (the physician) to cash a personal check.

This man has never been in our employ, or handled our goods directly or indirectly. Furthermore, we do not have the least idea who he is.

One of his victims describes him as, "a little fellow about 22 years old and all scarred up, claims the burns were caused by electricity."

We will greatly appreciate your courtesy in publishing this warning in a conspicuous place in your journal, so that this felon may be apprehended at the earliest possible moment.

We first heard of his work in Terre Haute, Ind., and have just heard to-day that he has been operating in Omaha and Hastings, Neb.

While this is a condition over which we do not have any control, we feel morally obligated to lend every possible aid in tracking this man down, as it is the victim's confidence in the integrity of our concern, which causes them to exchange their hard earned cash for worthless paper.

Any physician hearing of this man's whereabouts will confer a big favor on us by sending a telegram (collect) to our general office at Chicago. Very truly yours,

Victor Electric Company.

Per H. L. Kahl.

Chicago, April 9, 1915.

PUBLIC HEALTH

The State Board of Health held its regular quarterly meeting Friday, April 9. Dr. James Boyers was elected president, and Dr. H. H. Sutton was elected vice-president for two years beginning April 14. Dr. J. N. Hurty was elected secretary for the fifth time to serve for four years.

The board condemned twenty-one schoolhouses. The State Board does not make sanitary survey of schoolhouses unless patrons of the school petition for survey. All the school houses condemned were found grossly insanitary and unfit for school purposes. During the last five years about $5,000,000 worth of new schoolhouses, sanitary in every respect, and meeting all the requirements of the sanitary schoolhouse law have been built in Indiana.

The secretary reported that smallpox was practically endemic over the state and had been since January 1. During the quarter the disease had been reported as present in 120 counties. Only three smallpox deaths occurred during the quarter. The secretary also reported that the birth statistics were becoming more and more accurate each quarter. He believes that fully 90 per cent. of the births occurring in the state are now secured and it is to be regretted that physicians do not take a greater interest in reporting births for it is a matter of the utmost importance to their patrons. The secretary also reported the failure of the all-time health officer law and the board agreed there would be little or no further advance in public health work in the state until professional health officers, properly paid and giving their whole time to their work are employed in the state. He pointed out that some county health commissioners were being paid at the rate of from five to fifteen thousand dollars annually. In one county where the county health commissioner receives $1,385 it was found he gave 27 days' service according to his own records during the year, and this service was far from being expert, or highly efficient. Twenty-seven days' work for $1,385 is at the rate of $16,620 a year for a full time officer.

The secretary further reported that the only health legislation obtained was the "Harmon Anti-Tuberculosis Law" which makes it the duty "of every practicing physician in this state to report the name and address of every person known by him to be infected with tuberculosis to the health officer of the city, town or county in which such person resides at least five days after such fact comes to the knowledge of the physician." Careful attention to the wording will show that this command amounts to nothing for if the physician does not report "at least five days after such fact comes to his knowledge" then he need not report at all. The bill also sets forth in detail how rooms and houses infected with tuberculosis shall be disinfected. The process laid down in the law is that of gaseous formaldehyde disinfection and the technique was copied from an old circular. It is now known that formaldehyde does not destroy the acid-fast bacteria and is of little efficiency in disinfecting a tuberculosis infected room. The bill was written without consultation with any one who is acquainted with the hygiene of tuberculosis.

The legislature increased the Board of Health appropriation by $5,000 and gave $4,000 for the Indiana Mothers' Baby Book. This is $1,500 more for this valuable book than was given by the preceding legislature. Total increase of appropriation for the board was therefore $6,500.

An amendment was made to the schoolhouse law giving power to the secretary of the State Board of Health and the Superintendent of Public Instruction under certain circumstances to waive the requirement that new schoolhouses

shall not be nearer than 500 feet to steam railroads. This amendment was secured by the authorities of Warsaw where a site had been selected by vote of the people and which seemed satisfactory to all but a very few, but which was within the distance limit named in the law.

Dr. T. Henry Davis, the retiring president of the board, bade good bye to his brother members and announced that he would retire from public health work after serving forty years as health officer of Richmond and twenty years as a member of the State Board of Health. Doctors Boyers and Freeland were appointed to present a memorial or remembrance concerning the public health work of Dr. T. Henry Davis at the next meeting of the board.

The Board ordered that the annual health officers' school shall be held Tuesday and Wednesday, May 18 and 19, and the secretary shall prepare program and make all arrangements for said meeting.

J. N. Hurty, Secretary.

SOCIETY PROCEEDINGS

THIRTEENTH DISTRICT

The regular meeting of the Thirteenth District Medical Society was held at Rochester, April 28.

The program carried out was as follows: "The Venereal Problem," Howard O. Shafer, Chicago; "Present Status of Vaccine Therapy. Is It Proving of Definite Value?" F. M. Freeman, Goshen; "Twilight Sleep," R. B. Dugdale, South Bend; "Cysts of the Ovary," James A. Work, Jr., Elkhart.

At 6 o'clock a banquet was held at the K. of P. hall, followed by an after-banquet talk by Dr. Frank B. Wynn, state president, on "The Foundation of Habit."

Adjourned. C. Norman Howard, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Meeting April 6

First Vice-President Dr. Ada Schweitzer called the meeting to order.

Dr. T. W. DeHaas reported a case of laryngismus stridulous.

Baby, aged 3½ months, healthy, well developed, male; mother and father well with no hereditary diseases. When two weeks old was taken from breast and put on condensed milk without consulting physician. Improved, grew and appeared healthy except pale and waxy. Attack of rachitis at 3 months as shown by square forehead, wide, open fontaneles, cranio-tabes. Spasm of glottis for six weeks. Abdomen distended, spleen and liver normal. Breathing of peculiar grunting character. Doctor was called on account of acute indigestion. Stool after castor oil showed undigested food of pasty consistency with foul odor. Fifth day child was bright and seemed much improved. Died same afternoon during spasm of glottis.

Case report by Dr. Max Bahr: Presentation of a case of hysteria. A psychoanalytical study. The principle of psychoanalysis, the science which represents the outcome of the psychological methods of research inaugurated by Sigmund Freud of Vienna, is the psychology of the individual in relation to his environment. Psychoanalysis has its exclusive restriction to the sphere of unconscious impressions for which the individual has acquired a complete amnesis and which he is no longer capable of reproducing through voluntary efforts; impressions which exist in a realm functionally apart from the conscious life of the individual.

The extreme difficulty in locating and uncovering the complex, and by a complex is merely meant a group or constellation of ideas with a strong emotional toning, is due to the symbolic form in which it usually manifests itself.

The symptom to which I will confine my analysis in this case is the hysterical convulsive seizures which this patient had on an average of two or three times a week for a period of nearly four years. These convulsions in our patient were not accidental, were not purposeless and without meaning, nor did they occur at random, but I will demonstrate to you that on analysis they offered themselves to definite, logical interpretation, for they were the expression of certain enconscious trends which had failed of adequate appeasement.

You will note running through the history of this case which I will presently relate, a submerged desire on the part of the patient for her first husband, her childhood love, and a disintegration of the elements of her personality which could not be synthesized on account of her divorce from this husband and a marriage of both herself and this husband to other individuals, and later a still further impossibility of regaining her first and desired husband on account of his untimely death.

Under these circumstances the patient attempted to adjust herself to many disagreeable experiences of her life, and her mind in self defense endeavored to crowd out; to relegate to the realm of the forgotten these painful experiences and memories. Her convulsions were the compromise by which the patient's submerged complexes were permitted to enter her conscious personality.

Patient, female, aged 44, at the age of 20 years married her girlhood love. Three years later she was granted a divorce, which steps she took greatly against her wishes. Patient short time later remarried a man 25 years older than herself and which was a sort of a convenience marriage.

When patient was first married and living happily with her first and desired husband she resided in the same house with a Mrs. G., who had a great deal of domestic trouble with her husband which later led to a divorce. Our patient had a most friendly interest in Mrs. G. and sympathized with her greatly. Shortly after Mrs. G.'s husband left her Mrs. G. began to have convulsions which were attributed to her husband's desertion and ill treatment of her.

After our patient became divorced from her husband and especially after his death she adapted herself fairly well to her second conventional marriage.

At the age of 40, at the time of beginning of her menopause, she began to have much trouble and sorrow. Her favorite daughter (daughter of her first husband) became ill and died. Shortly following the patient developed convulsions which occurred with no degree of regularity, and which continued at different times over a period of nearly four years. These convulsions were typically hysterical in character and were generally brought on when some incidence relative to her first husband was brought to her mind. Mrs. G. would frequently come before her mind and, although she was frequently conscious of Mrs. G.'s misfortune and believing it similar in every way to her's, she was not conscious however of her convulsions being similar to Mrs. G.'s, and this only became clear to her after the psychoanalysis had already been quite well advanced.

These convulsions were merely symbolic of the submerged desire for the first husband. It was while she was living happily with her first husband that Mrs. G. was having her sorrows and thus it will be noted that this symptom was not merely a chance symptom, but on analysis could be logically interpreted, for the patient's convulsions were the expression of an unconscious desire which could not find adequate expression in the field of consciousness.

The patient also had an aphonia and many self-accusatory delusions which could also be explained in a similar manner.

Dr. W. F. Hughes reported a case of hereditary optic atrophy.

The patient a male, aged 22, gave a history of rather gradual onset. The usual causes of optic atrophy were eliminated. The family history showed eighteen blind persons. In typical cases the lesion consists of a low grade inflammatory process of the papillo maculae bundle of nerve fibers, followed by atrophy. In making the diagnosis the family history is an important factor. Treatment is of doubtful effect.

Case report, "Aneurysm of Ascending Aorta, Concave Side."

Mr. J., aged 37, weight 156 pounds. Height 5 feet, 11½ inches, white, consulted me in August, 1914, for a large tumor on anterior chest wall. Family history negative, typhoid at 14 years, gonorrhea at 20. No history of syphilis. A heavy strain three years ago was accompanied by pain in chest. Later a sense of fulness, dyspnea, difficulty of swallowing solid foods. Pain increasing and extending into shoulder and arm, greatly exaggerated on attempting to lie down. Tumor at time of death measured 7½ inches across the base and 4½ inches anteroposteriorly. A month before his death a necrosis of the skin appeared, from the upper margin of which a hemorrhage eventually took place resulting in death in a few seconds.

The expansile movement present in the tumor, together with the diastolic shock plainly heard and felt over same, and a lack of cachexia were the bases of a diagnosis of aneurysm.

Autopsy showed a sacculated aneurysm, 11.5 cm. in diameter, of the lowermost portion of the aorta, pushing forward and rupturing externally through the anterior chest wall. The lower two-thirds of the manubrium was largely destroyed by pressure necrosis; as well as parts of the sternal ends of the ribs. The heart valves and the aorta showed very marked atheromatous degeneration.

DISCUSSION

Dr. W. D. Hoskins: Case of Dr. DeHass. Death in laryngismus stridulous is not very common. First fatality I have known. Onset no doubt was from rickets. When breast fed babies are charted up, startling reports are shown. Reduction of calcium salts is largely responsible. Expiratory spasms are more fatal than inspiratory. Lesson is not to be too sure that laryngeal spasms will be all right. They all demand our best attention and treatment.

Dr. Neu: Dr. Bahr's patient. Had seen the patient found partially nude on street. Diagnosis was easily made. Had number of convulsive seizures on reaching sanatorium. Lip movement indicated some emotional outbreaks with a tendency to violence. Her efforts to communicate consisted of various movements of the lips. Throughout life, patient was regarded by family as peculiar and eccentric. None in private practice can carry out this work. Hysterical manifestations is only one thing to be considered. There is reason for every manifestation.

Dr. Sterne: Dr. Barr's case is a typical case and its presentation is to be commended very highly. Asked whether it was necessary to go through the formal manner of questioning in order to handle the patient.

Dr. Bahr replied it was.

Attendance sixty-six.

Meeting adjourned.

Alfred Henry, Secretary.

Meeting of April 15—Hotel Washington

Meeting called to order by vice-president.

Drs. George A. Coble, William F. Walsh and George S. Bond were elected to membership.

Paper: Dr. S. E. Earp on "The Use of Sparteine."

A description of the drug and its source was first given. The small dose frequently given may be responsible for the unsatisfactory results some have obtained. One to two grains of sparteine sulphate is small and larger doses have been given. Case reports were given showing favorable results in myocarditis, endocarditis, angina pectoris and cardiac dilatation. Several reports were relative to cardiorenal and goiter cases. Particularly was there good results in functional disease of the heart which sometimes coexist or follow the acute infectious diseases. Blood pressure is not increased so there is no fear of its use when there is a nephritis and a toxic heart muscle. Where a heart agent is needed in pneumonia, sparteine gives the most favorable results. There is less likelihood of exhaustion. Twenty-eight recent cases were used as an illustration and its particular appropriateness was mentioned of its use in old people with irregular hearts. At the City Hospital it was given in sixteen cases of morphinism and difficulties heretofore presented were prevented. The test was thorough from the fact that there was a great opportunity since the passage of the Federal Anti-Narcotic Law. At the onset it became a part of the Lambert treatment. One grain of sulphate of sparteine was given each six hours night and day. It was given hypodermatically in these cases. To favor sparteine does not by any means lessen the value of digitalis. They may in some cases be used in the same combination. It is more rapid in action than digitalis and is not cumulative. It is not in the same class as digitalis because it is a vasodilator and digitalis a vaso-

constrictor. It increases heart tone and leads all agents in favoring a better nutrition of the heart muscle. The force of the heart meets less resistance when sparteine is used. Thus we find its use of importance in some cases of endocarditis. If nutrition fails, then hypertrophy no longer increases and a failure of compensation results and this is generally the beginning of the end of patients with chronic endocarditis. Sparteine is the only agent that even approaches the requirements in such conditions. As a diuretic it is nonirritating.

Paper: H. K. Bonn, M.D., on "Surgical Therapeutics."

In this paper the author has only considered a few of the newer therapeutic measures which are utilized in surgical diseases. He has divided the subject for the sake of convenience into pre and postoperative therapeutics. The rationale of the preoperative treatment of a toxic goiter is given and the technic of Crile's "stealing" of the thyroid is also shown. The necessity for the securing of the confidence of thyroid patients is commented on and the author regards the complete confidence of the patient in the medical attendant as the first link in the chain of events which leads up to and through the procedure of removing the gland without the patient's knowledge. In considering acute appendicitis, Bonn quotes Stanton's article in the April number of the *American Journal of the Medical Sciences* as authority for the statement that perforation always occurs during the first forty-eight hours. Deaver, Oschsner and Moynihan are authorities for the dictum, that perforation spells purgation, or as the latter aptly says: "The sequence of events occur in the following order: pain, aperient, perforation." The author spoke of the use of the slightly reversed Trendelenberg position during the operation for appendiceal abscess in order that any freed pus may be sure to drain toward the pelvis, and has used it satisfactorily in several cases. Autogenous vaccines are given a high standing as a specific agent in septic postoperative nephritis. H. Albrecht's conclusions as published in a recent number of the *Centralblatt für Gynak* as regards coagulum, Fonio-Kocher are quoted namely: that the substance is very effective and acts promptly in all oozing from flat surfaces and in parenchymatous hemorrhages. Its use is suggested for bleeding in the culdesac or from the bowel surface following the separation of adhesions.

Paper: Dr. C. R. Schaefer.

Taking only four therapeutic agencies as examples, viz: Aconite, "Basham's mixture," calcium salts and boric acid, we find a wide variation of therapeutic applications, all of which endure as useful aids. So if we make use of only the collapse action of aconite we find it dependable in:

(*a*) The lessening of the vehemence of the short and sthenic fevers of infections of the upper respiratory tract.

(*b*) The diminution of a sthenic bronchitis.

(*c*) Abortion in a forming pneumonia.

(*d*) Reduction of high blood pressure in epistaxes, cerebral hemorrhage, headaches of non-purulent ear disease.

(*e*) As a circulatory divertant in migraine, in facial neuralgia, etc.

(*f*) Cardiac palpitation of neurasthenia, etc.

(*g*) As almost a specific in the forming stage of the sthenic fevers of childhood; the acute rheumatic fevers of the young and the old.

"Basham's mixture" continues in a field of its own in the anemias and renal inactivities of the chronic nephritis and the anemias of the chlorotic type, etc.

The calcium salts: (*a*) In the light of their now more or less explainable "antiphlogistic" action excel in the treatment of the urticarias; the exanthemata; some of the effusions; a great number of the dermatoses; in some cases of hay fever and asthma, etc.

(*b*) Their anti-diarrheal action is now readily explained.

(*c*) They are of important use as an anti-hemorrhagic — within certain limits.

(*d*) And almost specific in the "tetanies" and similar, more or less as yet ill understood derangements of the nervous system.

Boric Acid: Externally or locally applied, has a field of its own — but only as a dependable adjuvant. Thus used, in proper and readily available form, it excels as the bland or mildly antiseptic, non-irritating, unctuous deodorant; the soothing and slightly astringent aid to other therapeutic agents and means of treating inflamed or infected mucous membranes and skin lesions. It forms a bridge between asepsis and antisepsis; between mild astringency and decided irritation; it then will prove itself less irritating than pure water, but a greater stimulant and antiseptic than normal saline solution, etc.

DISCUSSION

Dr. Jacobs: Sparteine is very efficient in cases where we are used to using digitalis. It does not irritate the stomach; has quieting effect of morphin. It is depressing in large doses. Cited case of an alcoholic in which the drug did wonders. In Graves' disease where operative risk is too great it is used to great advantage. In rheumatic conditions in alcoholics it is used advantageously. High blood pressure is reduced. Not indicated in uncomplicated renal cases.

Dr. C. K. Jones: Discussing Dr. Bonn's paper commented on "stealing away" goiter. Morphin and atropin before anesthetic is valuable. Stomach lavage is also a great aid. Autogenous vaccines are used by some and rejected by others. Time will tell, however.

Dr. Foreman: There is little literature on sparteine. Renal cases, high blood pressure, no casts with edema works well. Also works well in low blood pressure, anemia, specific gravity high, and abundant casts with cardiac symptoms. Along with aconite veratrum is used with advantage in eclampsia. Control convulsions and eliminates toxins. Lowers blood pressure fifteen to twenty mm. each half hour until pulse rate is reduced to 60 or 70. Calcium chloride given 2 to 5 per cent. hypodermatically for coagulability of enzymes. Rennet in stomach and ferments in blood are increased.

Dr. Mellinger: Discussed use of sparteine during three months service in City Hospital in various cases of cardiac disease. Less nausea than digitalis. Non-toxic, reliable, non-irritant diuretic. Therapeutic dose 2 grains two to six hours for physiological effect, good heart tonic.

Dr. Brayton: Commented on the fact that a good attendance showed interest in the discussion of a few

simple drugs. Never wrote "antikamnia" on a prescription. We should write better prescriptions — prescribe simple drugs and not so many proprietaries.

Dr. Anthony said he was taught by Dr. Bobbs to have therapeutics on finger tips. Did not always know what the diagnosis was, but always had something to give. Cited cases of convulsions controlled by veratrum viride.

Dr. Fiske: The use of an aqueous solution of scoparius produces better diuretic effect than sparteine itself.

Dr. Moore: Cited case of a pulseless man being revived by sparteine.

Meeting adjourned. Alfred Henry, Secretary.

Attendance eighty.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of April 9, 1915

Regular meeting of Muncie Academy of Medicine was held in Y. M. C. A. building, Friday evening, April 9, with President O. E. Spurgeon, M.D., in the chair.

Dr. Mix exhibited a patient convalescent from a profound splenic myelogenous leukemia. At the beginning of treatment enlarged spleen reached to umbilicus on right, and within two inches of ischium at lower extremity. Treatment consisted of exposure to Roentgen ray and small doses of benzol.

The quiz on "Gastric Digestion" was conducted by Dr. J. C. Quick.

The paper for the evening was read by Dr. F. E. Hill on the subject of "Diabetes," who said in part: There are two types of glycosuria, (1) diabetes mellitus, due to hyperactivity of adrenal system, and (2) asthenic glycosuria due to hypoactivity of adrenal system. An excessive excretion of sugar in urine is due to presence of waste products in blood; substances which indirectly keep the adrenals overactive, and the pancreas being thus caused to secrete an excess of amylopsin. The adrenal system includes pituitary body and thyroid gland. There can be no diabetes mellitus where there is harmony of secretions between adrenal system and secretions of pancreas. The liver seems to be ready to convert the glycogen starch in its cells into sugar, as the system requires it. The internal secretion of pancreas inhibits this action while adrenal system stimulates it. If pancreas is removed and animal survives, diabetes results and continues till death. On the other hand if a small portion of pancreas is left diabetes does not necessarily follow. It is proved that it is the lack of internal secretion from the gland that causes the trouble and not injury to nerve structures, or disturbed digestion in intestines. Production of diabetes is not limited to action of a single organ, however; other organs and whole sympathetic nervous system may be involved. The underlying conditions in each must be considered. Majority of diabetics are hearty eaters — the disease being more frequent in meat eaters than in those who are excessive users of carbohydrates. Recent experiments have shown that the exclusion from the diet of starches is not necessary to the cure of glycosuria. A better understanding of this condition greatly simplifies the treatment.

Adjourned. H. D. Fair, Secretary.

Meeting of April 23, 1915

A quiz on "Digestion" was conducted by Dr. W. J. Molloy.

Dr. U. G. Poland read a paper on "The Treatment of Diabetes." The only method of treatment of real value is dietetic, all others are subordinate. Diabetic glycosuria usually increases with time, while tolerance of patient decreases, and depends on the relation between amount of sugar excreted and quantity of sugar and sugar producers ingested. A second fundamental is: When diabetic is free from sugar his tolerance usually increases, therefore our object should be to render patient sugar free. Treatment should be started early. Sugar produced from fats does not play such an important rôle in diabetes as does that from starches. Mild and moderate cases are to be made sugar free and maintained in this condition for six months and kept under close observation. The nature of a severe case becomes manifest when, on first attempt to produce sugar reduction, feebleness of their tolerance appears. In such cases our primary object is to bring our patient to a point where life can be maintained without a deficit, which means we must limit the loss of sugar in urine. We should determine the exact qualitative and quantitative diet for every diabetic who comes under our care. Any factor which tends to disturb the diabetic's general health aggravates the underlying disease. Psychic treatment is important and must be regulated with judgment. The patient must know what ails him in order that he may cooperate in treatment, but he must not worry, for depressions make him worse, and relapses due to errors in diet may bring on undue apprehension as to the dangers of the disease. Fresh air and sunshine, judicious exercise, care of skin and intelligent intestinal elimination are essentials to successful treatment.

Dr. C. A. Ball read a paper on "Urine in Diabetes Mellitus." Essayist mentioned the fact that both polyuria and glycosuria were due to hyper-glycemia or hyper-gluremia, that most characteristic feature is sugar and that diagnosis is largely dependent on its presence. Normal urine contains glucose but in such small amount as not to be demonstrated by ordinary tests. Likewise there is a normal sugar content in blood ranking from .07 to .1 per cent. In estimating percentage of sugar in urine the twenty-four-hour specimen should be used. Of all reduction tests for sugar, Benedict's seems to be the most reliable and promises to replace all others. It is said to be ten times as sensitive as Fiehling's, Haine's or Purdy's, and not to be reduced by uric acid, creatinin, chloroform or the aldehydes. Benedict's is also used for quantitative estimation. Where there is any doubt as to the accuracy of a reduction test, the fermentation test should also be used. Other urinary ingredients of importance in diabetic urine are acid substances or acetone bodies. The exact relation of acidosis to diabetes and of acidosis to coma is not definitely understood. We do know that acidosis diminishes when carbohydrate tolerance improves. Suggestion has been made that acidosis does not produce the coma, but both are due to some common toxic cause. The relatively large amounts of acids in the blood cause the liberation of bases of which ammonia is the main one. The estimation of ammonia gives an indirect but valuable guide as to progress or extent of acidosis. It is not an infallible indicator, however,

and sometimes the direct estimation of acetone is necessary.

In discussion, Dr. Mix and Dr. Hill took issue with essayist regarding dietetic treatment of diabetes. Both physicians cited cases where administration of certain metabolic ferments made by pharmaceutical houses had, with but little restriction in diet, worked excellent results. Dr. Hill's patient was a gourmandizer and insisted on eating what she pleased, yet improvement was rapid and sugar disappeared from urine.

Adjourned. H. D. Fair, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of March 2, 1915

Society met in regular session in assembly room of the courthouse with twenty-three members present. Meeting called to order by the president. Minutes of preceding meeting dispensed with owing to the temporary absence of the secretary.

Dr. Kaadt presented the case history and specimen of a full-term hydrocephalic fetus with spinabifida; club foot; hare lip; cleft palate; delivered in breech presentation.

DISCUSSION

Dr. McOscar was called in consultation with Dr. Kaadt in this case. On introduction of the hand, was able to get hold of a foot and felt the cord, which was not pulsating, so I put a hook in the orbit and brought it down to where forceps were with difficulty applied, and, with a good deal of force delivery was accomplished.

Paper of the evening, "Complications of Tonsillitis," was read by Dr. B. M. Edlavitch.

DISCUSSION

Dr. L. P. Drayer: The importance of this disease cannot be too strongly emphasized. Focal infection is frequently the cause of chronic invalidism. Autogenous vaccine is worthless in streptococcic sore throats. The mortality is high. Dr. Drayer thinks he slightly modified one case by small doses of neosalvarsan. He reported two cases of chorea treated with neosalvarsan intravenously with satisfactory results. Fowler's solution, minims 15 per dose, has been reported by an English physician with favorable results in chorea cases. Dr. Drayer asked about the strength of $AgNO_3$ solution used by throat men.

Dr. Glock: Ballenger and others recommend a strong $AgNO_3$ solution used early in the disease, even up to 90 per cent. strength. Silver does not penetrate deeply. Urethritis and ureteritis reported as complications of rheumatism until the tonsils were removed. Orchitis also may complicate tonsillitis. Dieulafoy injected ninety-six guinea-pigs with tonsillar tissue and produced tuberculosis in fifteen. Ophüls found tuberculosis in 6.2 per cent. of 1,500 tonsil specimens examined.

Dr. E. J. McOscar: Local treatment does not reach systemic symptoms. The differential diagnosis of diphtheria from other forms of tonsillar infection, clinically, is based on adherence of the membrane.

Dr. Glock referred to a case in which there developed sixteen metastatic abscesses which ceased forming after tonsillectomy.

Dr. A. E. Bulson referred to toxemia resulting from chronic tonsillar infection. Spoke of a prolonged case of sciatica which has been relieved by the removal of two small atrophic tonsils which contained in the center of each a small abscess. Indorses nitrate of silver treatment for all acute cases, but uses solution of less strength and carries it into the crypts.

Dr. Wheelock: I think many cases of choroidal infection are the result of tonsillar infections. Referred to one case of periostitis and lymph adenitis about the ear, originating from infected tonsils. Uses a saturated solution of carbolic acid and camphor locally for relief of pain in acute attacks. Advocates the Jacobi treatment of 15 minims of tincture of the chlorid of iron for suppurative treatment. Related a case of facial erysipelas following an attack of tonsillitis, latter developing delirium from streptococcemia.

Dr. J. C. Wallace formerly used the tincture of iodin locally for tonsillitis and abandoned it because of inflammation it produces. Believes in drainage in these cases. Acute tonsillitis cases should be put to bed and isolated.

Dr. Bulson recalls the frequency of middle ear infections following tonsillitis. Many mastoid inflammations frequently follow acute follicular tonsillitis. Tonsillar inflammation may be stirred up by operations in the nose. Cresatin is now recommended in place of carbolic acid. It is less escharotic and quickly analgesic.

Dr. Wheelock: Carbolic acid with camphor is not escharotic.

Dr. M. F. Porter, Jr.: Acute tonsillitis, when seen, is a bacteremia and should be treated accordingly.

Dr. Porter: The curetting of acutely inflamed tonsils is capable of producing a bacteremia. The symptoms in these cases may be due to a toxemia resulting from this infection.

Dr. Bulson defends curetting of follicles in acute tonsillitis as it establishes drainage.

Dr. M. F. Porter, Jr.: There should be no ambulatory treatment of tonsillitis. Urges more cooperation between the specialist and the general practitioner in the treatment of these cases.

Dr. M. F. Porter: Tonsillitis gets well often by itself. He does not believe in stirring it up with a curette.

Dr. Wheelock does not advocate surgical work on any acute case of tonsillitis.

Dr. Weaver: Dahlia in 4 per cent. solution is a good application. Rest in bed is the most important

Dr. Glock: Tonsillectomy during acute stage of this disease may result in complications.

Dr. Edlavitch (in closing): The subject is too large for a single paper. Mentioned appendicitis and peritonitis as complications of tonsillitis. The evidence is now against tuberculosis infection arising from a tonsil focus.

Application of Dr. Eberhard presented and referred to the Board of Censors.

A copy of Senate Bill No. 380 read, which is as follows:

Section 1.—*Be it Enacted by the General Assembly of the State of Indiana,* That section (9) nine of the above entitled act be amended to read as follows: to wit; Section 9.—Any person who shall practice medicine, surgery, osteopathy or midwifery in this state without having a license duly issued as hereinbefore provided, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than one hundred ($100) dollars nor more than three hundred ($300) dollars, and on second

conviction imprisonment in the county jail for not less than thirty days nor more than six months.

Sec. 2.—The term "Osteopathy" as used in said Act shall be construed to mean that system of medical practice embracing any form of mechanical or adjustment therapeutics. It shall also be regarded as practicing osteopathy within the meaning of said Act if anyone shall profess publicly to treat, adjust, correct, alleviate or relieve any ailment, displacement, disease, injury, deformity of the human body by any treatment, manipulations or movements with the hands or mechanical appliances in an effort or an attempt to relieve any pressure, obstruction, displacement or defect in any bone, muscle, ligament, nerve, vessel, organ or part of the human body, after having received, or with the intent of exactation or receiving therefor, either directly or indirectly any bonus, gift, or compensation whatsoever. Provided however that nothing in this section shall be construed to restrain or restrict any legally licensed physician or surgeon in the practice of his profession.

Motion carried that this society go on record as indorsing this bill and that a copy of this action be sent to Dr. Gott, secretary of the State Board of Medical Registration and Examination, with a copy of this bill attached.

The following communication of the Board of Health was read:

Resolved—That the minimum period of quarantine against diphtheria shall be fourteen (14) days. The attending physician can submit cultures from nose and throat on the fourteenth day. If these cultures be positive, other cultures shall be furnished at intervals of forty-eight hours by the attending physician. In the event of negative cultures from the nose and throat, a deputy from this department shall take cultures, and in event of these cultures also being negative, the patient shall be released from quarantine.

(Signed) Dr. H. O. Bruggeman.
Dr. H. A. Duemling, Vice Pres.
Dr. J. H. Gilpin, Secretary.

Dr. Porter: This society should now go on record as indorsing this method of release from quarantine. Motion carried unanimously that this society indorse this resolution. No further business.

Adjourned. B. P. Weaver, Secretary pro tem.

Meeting of March 9, 1915

Society met in regular session in assembly room of courthouse with seventeen members present. Meeting called to order by Dr. Morgan in the absence of President Rhamy. Minutes of preceding meeting read and approved as read.

No clinical cases.

Regular program—Case report night.

Dr. C. R. Dancer reported the following cases:

Case 1.—W. W., aged 89 years; one week ago took some cathartic, now has abdominal pain, paroxysmal in character; January 3 had an attack of abdominal pain and when I saw him there was a large suprapubic fluctuating tumor. The patient claims to have had this enlargement for twenty years, and this fact is corroborated by his family. The patient was able to void the usual quantity of urine; within the next few days he improved. January 6 the tumor had increased considerably in size and at this time he was able to void considerable urine, which he had been doing since he came under my observation. Notwithstanding this fact, a soft catheter was introduced easily and some urine was withdrawn but ceased to flow because of hemorrhage plugging the catheter. He continued to grow worse and was taken into the hospital January 7, at which time a catheter was introduced and considerable urine withdrawn. This catheter was left in situ. This was followed by marked reduction in the size of the tumor. He became unconscious and died January 9. Post-mortem examination revealed a general arteriosclerotic process and this immensely dilated and sacculated urinary bladder, which I exhibit to you.

Case 2.—W. S., aged 5 years; came home from school; was nauseated; vomited a few times; complained of pain in the epigastrium; pulse 114; temperature 98.3. On the following day the pain increased as well as the vomiting; pulse, 108; temperature, normal; some symptoms simulating appendiceal inflammation. The following day, temperature and pulse the same; the abdomen prominent and soft; not tender, but colicky pain was present; pulse, 108; temperature, 99.2. Differential count of the blood showed 98 per cent. polynuclear neutrophils, 2 per cent. small cells. The urine contained acetone and diacetic acid. Patient's symptoms disappeared entirely under the administration of bicarbonate of soda.

Discussion of Dr. Dancer's Cases

Dr. M. F. Porter: I think that this is the most classical specimen of sacculated and dilated bladder I have ever seen. There are a number of false diverticula present, made up from the mucous membrane which has penetrated the muscular layer of the bladder. The prostate has probably obstructed the urethra so that increased effort to empty the bladder has caused this dilatation. Many bladders of this type contain concretions in this diverticula.

Dr. Bruggemann: This case did what many old men do on the installation of a permanent catheter, i. e., they die of acute uremia.

Dr. M. F. Porter: The best plan in these cases is the introduction of a permanent catheter, and in many cases this procedure will produce a polyuria, and after this a normal amount of urine will flow.

Discussion of Case 2

Dr. Weaver: We see this condition oftener than we recognize it. Many of these youngsters have metabolic disturbances without acetone or diacetic acid. Many unexplained coughs come under this same heading.

Dr. M. F. Porter: It seems to me that this condition is the same, only in a lesser degree, as you find in those cases of very acute atrophy of the liver, and if this is true, then we should get at these cases early and prevent its occurrence.

Dr. B. P. Weaver presented the following case for diagnosis.

Recurrent Sibilant Bronchitis

Baby L., aged 8 months, female. Seen January 23, 1915, for a continued fever of 105 for past ten days.

Family History.—Negative, except that mother and brother contracted pertussis five months ago and are both still coughing some.

Personal History.—Breastfed for three months, did not gain, so was put on various artificial foods, including malted milk, Mellin's food, modified milk and Eskay's food; on last named for past four months

during which time she has gained consistently, having weighed seventeen pounds at beginning of present illness. At four months had what was called influenza, with maculopapular rash.

Symptoms.—Ten days ago baby became ill with fever, constipation and some cough, temperature ranging between 104 and 106 practically continuously since. Respirations never much above 40 and pulse about 140. Takes food well and seems hungry at end of each interval. Bowels have been loose, sometimes as many as ten stools in twenty-four hours, though usually not more than three or four. No stool or urine specimens available at time but father, who is a physician, says stool does not look bad. Has rather croupy, spasmodic, laryngeal cough.

Physical Examination.—Well-nourished but pale baby. Anterior fontanelle not depressed. Pupils and tendon reflexes normal. Some sordes on lips and tongue and two small ulcers on hard palate near alveolar border. No teeth. Throat and ears negative. No adenopathy. Diffuse maculopapular rash appeared first on belly five days after onset of illness, and is now present on all parts of body, reddish brown in color and disappears on pressure. Two localized areas of redness and slight swelling on abdominal wall marking site of injection of ½ c.c. pneumococcus antigen introduced on previous two days by another physician who had made a diagnosis of lobar pneumonia. Lungs and heart negative, except for perhaps slightly increased bronchial breathing over left apex anteriorly, with occasional coarse râles seemingly transmitted from trachea. Level of belly somewhat above that of chest. Spleen not palpable. Liver dulness not increased. No areas of tenderness discoverable.

Father telephoned next day that child had had attack of what seemed to be laryngeal edema the night before, was better this morning although it seemed hard for her to swallow or to cry loud. Temperature, 102½. Somewhat distended.

Following this time for the next week, the child's temperature continued to decline and the apathy was lost, she becoming quite playful and practically normal in both appearance and actions. At the end of this time, however, her temperature again ascended to a point around 104 and the picture returned as above described. Upon my advice the child was brought to the city and placed in the hospital for closer observation.

A stool was obtained by enema which showed large, light lumps containing some fat droplets and an abundance of neutral fats which stained well with Sudan III. The blood on the occasion of my first visit showed a total white count of 22,750, polynuclears 43, small lymphocytes 24, large lymphocytes 17, transitionals 13, eosinophils 2, mast cells 1. Widal negative.

Sputum showed very few pneumococci but an abundance of micrococcus catarrhalis. Only a few drams of urine were obtainable, the examination of which was negative.

DISCUSSION

It is of interest to add that the milk used in the Eskay's food fed to this baby came from a herd of Jersey cows. The clinical picture together with the stool findings were sufficient to warrant a diagnosis of fat indigestion and the baby was put on a skim milk diet with daily colon flushings for a period of about five days. Even in the absence of findings of diacetic acid and acetone in the urine, 5 grains of sodium bicarbonate were given three times a day for the first two days and then 2 grains three times a day. Two minim doses of tincture of belladonna were ordered for the cough. The temperature continued progressively downward on this treatment and the child again returned to a perfectly normal condition, in which state it has remained since its return home, a letter from the father very recently having informed me that the child shows no indications of ever having been sick. My original diagnosis was fat indigestion with a possible pertussis, but since reading the articles of Rachford and Kerley in the Archives of Pediatrics for July and October, 1914, respectively, on the subject of Recurrent Sibilant Bronchitis, I am convinced that this syndrome more nearly explains the condition at hand than any with which I am acquainted. According to their idea the symptoms are based on an acid intoxication which may manifest itself in many ways, such as migraine, recurrent vomiting, fat indigestion, recurrent bronchitis, etc., with or without the presence of acetonemia. Butter fats and eggs are badly borne by these youngsters, as are sugars and orange juice. Numerous interesting cases are recited by both authors wherein the disabling bronchitis invariably disappears after a regulation of the diet plus the administration of minute doses of sodium bicarbonate, either with or without small doses of sodium salicylate.

Dr. W. W. Carey presented the following case history for diagnosis. Patient presents herself for relief from pain in stomach, growing weakness and a run-down condition in general. Aged 60 years; married; one child; American; has always been well but not strong as a child or in girlhood. Has had all the diseases of childhood, except diphtheria and scarlet fever. No sickness in early adult life. Married after 30 years of age; a son was born two years later; she has never been so well since the birth of this child; menopause at 45 years of age; her father died from dropsy at the age of 70; her mother died from stomach trouble at the age of 60; she lost one sister of dropsy and one of uremia; one brother living and well. Personal appearance: She looks ten years older than her given age; her skin is dried and harsh with a peculiar pallor or cachectic appearance; her body is greatly emaciated; veins large and full of dark sluggish blood. Examination of chest: Lungs negative; heart slightly enlarged; apex under left nipple; heart sounds distinct, but weak in force; suffers from palpitation on exertion; cannot eat anything without distress from fermentation; always constipated; pain of a dull, aching character extending from the pit of the stomach up to and behind the right shoulder blade. Tenderness on percussion over the epigastrium and in region of the gall-bladder. The muscles of the right side are hard and rigid, but after manipulation they relax and on deep pressure a slight tumorous mass could be made out, coming from below in the abdominal cavity and leading up to epigastrium in the upper portion of the umbilical region; not attached yet does not move with respiratory excurvation. The glands in the groin are enlarged and hardened and fixed, glands in the neck and clavicular region somewhat enlarged; inguinal glands not affected; she is constantly nauseated; no vomiting;

has lost fifteen pounds within the last six weeks; pain is greatly aggravated by eating; has eaten no meat for months; eggs are especially distressing as is milk at times; temperature slightly above normal; pulse, 80 to 90; no trouble with kidneys or bladder. Blood examination: Hemoglobin, 60 per cent.; white cells, 12,960. Differential count: Polynuclears, 63 per cent.; large mononuclears, 6 per cent.; small mononuclears, 26.5 per cent.; transitional, 0.5 per cent.; eosinophils, 3 per cent.; mast cells, 1 per cent. Gastric analysis—testmeal: Color, green; visible sediment, 20 per cent.; mucous +; blood pigment, 0; bile pigment +; total acidity, 24; hydrochloric acid, 0; combined acid, 12; organic acid and acid salts, 12; proteolysis, strong; occult blood faint; bile present; microorganisms, yeast cells; food material, starch grains; fat is the most of sediment; epithelial cells few. Feces: Chocolate color; occult blood faint; no pus.

DISCUSSION

Dr. Weaver: In an article recently published of the findings in gastric disease, gastric carcinoma cases frequently have an intolerance to meet. I should say that a Roentgen-ray examination in this case is in order. She has blood in the stool and there are findings which would suggest a lesion of the gastro-intestinal tract.

Dr. M. F. Porter: At which costal cartilage does this tumor disappear under the ribs?

Dr. Carey: At about the last one.

Dr. M. F. Porter: I do not think that this case is completely studied until this stomach is either filled with gas or water to demonstrate its position.

Dr. Carey: Does this case history suggest pancreatic cancer?

Dr. M. F. Porter: Cancer of the pancreas would not be movable; jaundice would be present; disturbance of fat digestion in the stool would be present. Sarcoma of the pancreas might be present, for this variety of tumor does not effect secretion structure.

The application of Dr. I. W. Ditton acted on favorably by the Board of Censors was presented. Motion carried that the secretary cast the unanimous ballot of this society for Dr. I. W. Ditton for membership. Ballot was so cast.

Adjourned.

Meeting of March 16, 1915

Society met in regular session in the assembly room of the courthouse with twenty-two members present. Minutes of preceding meeting read and approved as read.

Regular program, "Clinical case report night."

Dr. B. Van Sweringen reported the case history of a case of rupture of the rectum.

RUPTURE OF THE RECTUM

Dr. Budd Van Sweringen reported a case of rupture of the rectum occurring in a young man who had been working in the Pennsylvania shops continuously for the last five months. He was sent into the hospital at half past ten at night in a condition of shock but perfectly conscious and rational and able to describe his accident. This consisted of a fall down three or four steps of an outside stairs he was descending and was due to stepping on the cuff of his trousers leg. He did not vomit nor did he lose consciousness after the accident. His pain was located in the right hypochondrium and was thought by him to be due to the fracture of one or more ribs. No crepitus was discovered, however, nor was any mark on the skin found anywhere on the body, that is, there was no abrasion or contusion. He was put to bed, heat was applied to the painful area and he was given ¼ gr. of morphia. The next morning his abdomen had become distended and his pulse had risen to 160. It was evident that some serious intra-abdominal accident had occurred and he was laparotomized at once. The belly was filled with a dark, liquid material in which were particles of undigested food. The stomach and upper abdomen were thoroughly searched but no perforation found until the rectum was reached where a four-inch longitudinal slit in the serosa and muscularis was found which perforated the mucosa for about one inch near the middle. This was quickly closed by a purse string suture, the belly cleaned out rapidly, a drain inserted and the patient returned to bed where he expired in about half an hour.

The pathologist's preliminary report (Dr. Rhamy) says that the piece of rectum submitted to him was in a state of necrobiosis and was very easily torn. Evidences of a very diffuse double pleurisy were the only other macroscopic findings at the post mortem except a scar about two inches in diameter on the left anterior abdominal wall which looked as if it had recently been open.

So far as I am able to learn, this is the only case reported of a rupture of the rectum without any external mark of violence. All recorded cases seem to have been due to trauma as the introduction of syringe tips, rectal tubes, foreign bodies, or manipulations within the abdominal cavity during operations.

I have no evidence as yet as to the cause of the necrobiosis, but will report more fully later.

DISCUSSION

Dr. B. W. Rhamy: The sections from Dr. Sweringen's case are not entirely completed, but I have gone far enough to know that there is present a state of necrobiosis in the bowel. The bowel is waterlogged and tears easily through all the coats six inches each way from the rupture. This molecular disintegration could not, in my opinion, be a post-mortem condition as it would take a considerable length of time for the change to take place. It could be due either to infarct of the mesentery vessels or to an endarteritis. This would have been a good case on which to make a post-mortem Wassermann test. If the blood is obtained before it begins to degenerate, the Wassermann test is perfectly reliable. There was a linear tear through the serous coat about four inches long, with a small hole in the center. Owing to the necrotic condition, the coats of the bowel were loosely connected, and at the side of the rupture one flap of the serous and muscular coats could be layed back from the mucous membrane for about two inches on the side, and at the inner aspect of this flap were several smaller holes through the mucous membrane.

Dr. M. F. Porter: I understood Dr. Van Sweringen to say that there were undigested food particles in the peritoneal cavity. If there were, there undoubtedly was some other cause of its presence than this perforation in the rectum. If there was no other process than that reported in this case, I am loath to believe that a fall, such as is described, could be responsible

for the rupture in this patient's bowel. I thought when I first heard the report, of a diverticulitis. It is not uncommon for inflammatory diverticula to become very markedly thinned out, so that they are composed of nothing but the mucous membrane and the peritoneal covering. It would be very easy for one of these to be ruptured under conditions such as reported in this case.

Dr. Bruggemann: I saw this case, and I am convinced there was no other opening in his gastro-intestinal tract besides the perforation described. The material in the peritoneal cavity looked like fluid feces of the upper portion of the intestinal canal. There was no scabilus masses present. There are a number of cases of rupture of the bowel produced by a fall with the patient landing on the feet. The thing of interest in this case to me is that there were no symptoms of intestinal rupture present until after peritonitis from the leaking of the contents of the bowel into the peritoneal cavity.

Dr. McEvoy: I reported a case of rupture of the bowel in a healthy man following a wrestling match. The symptoms produced were his sudden, intense pain in the abdomen without other symptoms. The operation proved to be a rupture of the duodenum. I should like to know what symptoms are present in these cases on which an accurate diagnosis might be based.

Dr. Morgan: I saw this man before the operation and he did have a lot of pain in his abdomen. My examination was very superficial, but from it I was able to ascertain the fact that some serious catastrophe had occurred. This man walked into the hospital after his injury, from the cab that brought him to the hospital. It seems to me that this point would not lead one to open this man's abdomen hurriedly, even if he had suspicioned intestinal perforation.

Dr. Weaver: It is entirely possible to me, that the nutrition of this bowel might have been cut off as a result of pressure from the hemorrhagic exudate following the injury. We will be better able to discuss this point after the complete microscopical sections of the bowel are made.

Dr. McEvoy: A case of obstruction due to Meckel's diverticulum had gangrene of the bowel at the point of pressure, and the symptoms of obstruction had only recently developed in this case.

Dr. Grandy: A year or so ago in a case of thrombosis of the mesenteric artery, the entire bowel was gangrenous.

Dr. Bruggemann: The stripping of the layers occurs in the bursting of any viscus with a movable mucous membrane. This man had one long tear in the mucosa which was sewed up. Many cases of rupture of a hollow viscus are on record, in which a tear takes place in the mucous membrane and is plugged and peritonitis occurs later, and other cases in which the serous coat is torn and the mucous membrane is intact.

Dr. B. Van Sweringen: When one sees undigested food stuff in the peritoneal cavity, one always thinks of perforation of the portion of the bowel which should contain this material, but in this case there was not a perforation in any other portion of this gastro-intestinal tract.

Dr. Enslen: I had a case of thrombosis of the mesenteric vein in which the symptoms, i. e., abdominal pain, etc., lasted over a period of three weeks before the attack which proved fatal.

Dr. Beall reported the case history and exhibited roentgenograms of a case of foreign body in the lung.

K. B., aged 10; schoolboy; bronchitis at 2 years; pneumonia at 4 years; measles at 5 years; cough ever since he had pneumonia, there has been a good deal of phlegm and occasionally some blood. He has had several attacks of pleurisy. I saw him for the first time March 9, 1915.

The sputum examination showed no tuberculin and a von Pirquet test was negative; on this account, I had Roentgen-ray pictures taken which show a shingle nail in the lower portion of the right bronchus.

Close questioning of the parents gives no information as to how this nail got into the chest.

Mrs. H., aged 30; primipara, normal course of pregnancy except abdomen very large: Had been in labor twenty-four hours when first seen. Examination shows rather soft tumor mass almost filling pelvis, cervix very high up on left side through which a head could be felt. Paracesarean section done by Dr. Duemling. Child weighed 13½ lbs. Tumor proved to be a myoma, involving cervix. Tumor weighed 3½ lbs.

DISCUSSION

Dr. McEvoy: I know of two instances where foreign bodies have been removed from the lung. In one case where this body, after many years, became calcified, and following a paroxysm of coughing was expectorated.

Dr. Bulson: I think that a trial to remove this body by the bronchoscope should be made. At least, you can locate it with this instrument. It would be more easily done on this side of the lung than on the other side, because you have a straight course owing to the direction of the bronchus. I think that the removal of this foreign body by bronchoscopic methods could be done with less damage to the child than any other method of external operation.

Dr. Bruggemann: Like Dr. Bulson, if this were my child, I would prefer the attempt to remove this body by the bronchoscope than by external means.

Dr. Rothchild: As an aid to locating the possible point of entrance of this foreign body through the esophagus in case it had been swallowed, an examination with the esophagoscope would show the wound of entrance. Stereoscopic plates of this case would also be of service.

Dr. Weaver: I believe that this child should have the benefit of the bronchoscopic examination, also a Roentgen ray with this instrument introduced would help in locating the body.

Dr. Bulson: I think it is hardly probable that this nail entered through the esophagus, because the head went down first and in all probability would have gone through the bowel via naturalis, and too, if the nail had lodged in the esophagus it would have become encysted there.

Dr. Grandy presented a number of unusual and interesting Roentgen-ray plates, as follows:

Dislocated scaphoid.

Dislocated ulna and fractured head of radius.

Dislocated astragalus.

Dislocated hip, congenital—double.

Dislocation of the hip and separation of the epiphysis.

Dislocation of the shoulder, subclavicular.

Fracture of femur below great trochanter.

Adhesion between transverse colon and pelvis.

Incompetent ileocecal valve.

The application of Dr. Eberhard acted on favorably by the Board of Censors presented. Motion carried that the secretary cast the unanimous ballot of this society for Dr. Eberhard for membership. Ballot so cast.

Dr. Weaver offered the following resolution: "That we employ a stenographer to take the discussions at the meetings of this society." No second. Motion that the secretary be paid $125.00 per annum. Seconded. Motion that the society adjourn.

G. Van Sweringen, Secretary.

Meeting of March 23, 1915

Society met in regular session in the assembly room of the courthouse, with twenty-three members present. Minutes of preceding meeting read and approved as read. Meeting called to order by the president.

Clinical cases.

Dr. Glock reported a case of mastoiditis.

Male, aged 53, referred to me by Dr. B. Van Sweringen. Came in complaining of roaring in the left ear, pain in the ear and hearing somewhat dull. There had been no discharge, was slight redness of the drum-head, but no bulging. No tenderness over the mastoid, but stated that there had been some shooting pains back of the ear on several occasions. The ear was politzerized and a 12 per cent. solution of carbolic acid in glycerin dropped in the external auditory canal in the hope of checking the inflammation. He was seen daily, the condition remaining unchanged for one week, when a slight bulging was noticed at which time a paracentesis was done, which was followed by a thick mucopurulent discharge. From this time his condition improved and eight days later the discharge stopped, the perforation closed and the patient got along nicely for ten days, when the pain returned and he came back for further treatment. Politzerization and the carbolic and glycerin solution were again resorted to but in two more days bulging was again noticed and a second paracentesis was done followed again by a thick mucopurulent discharge. A few days later tenderness appeared in the mastoid tip, gradually increasing in spite of the use of ice applications. He was removed to the hospital and after two days of waiting consent was given to the opening of the mastoid. The simple operation was done. On opening the mastoid tip it was found to be composed of cancellous tissue in which near the tip of the mastoid process were found three small foci of infection from which no connection could be traced to any cavity, about a quarter inch of healthy bone separating the closest of these areas from the mastoid antrum which was small and placed high up, slightly above and posterior to the external auditory canal. This case was reported because of the peculiar findings at operation as I viewed the infection in the mastoid tip as being metastatic abscesses following an acute suppuration in the middle ear. There was neither pus nor granulations in the antrum.

Regular program, "The Ocular Manifestations of Syphilis," by Dr. H. M. Senseny.

DISCUSSION

Dr. Wheelock: I have not seen a case of ocular syphilis for some time. I saw a case of gumma of the iris in which mercury was given by mouth and was accomplishing nothing. Mercurial rubs were used and the gumma disappeared. I have given mercurial rubs in what I think might be called heroic doses. I have given them in dram doses daily for three or four months without producing phthylsm. I am very careful about my instructions in the use of chlorate of potassium mouth wash in these cases.

Dr. Bulson: I firmly believe that inunctions is the best method to administer mercury. I insist on the hot bath preceding the rubs, or if a bath cannot be made complete, a scrubbing of the part to be rubbed is directed. I have used injections of gray oil, but have returned to the use of inunction. I almost always combine K. I. with my treatment. I have noticed a rather general involvement of the uveal tract in children, the victims of inherited syphilis. I have found an involvement of the choroid following interstitial keratitis. As to the effect of salvarsan in eye lesions, there is much variance of opinion. I do not know if it would be wise to use salvarsan or neosalvarsan in a case of a child with optic atrophy in both eyes and blindness in one, which I now have under treatment. I believe we are justified in having the Wassermann reaction made in all eye cases of a suspicious nature. I believe we do not crowd our treatment enough in syphilitic eye lesions. These conditions call for heroic treatment. If the canaliculi are blocked off, you can use atropin as strong as you like in that eye without giving the patient the physiologic action of the drug. Always give potassium iodid in large doses.

Dr. Glock: The incidents of ocular syphilis were noted by oculists long before the discovery of the Wassermann reaction. Many cases were suspected of being specific and were given the therapeutic test. A few years ago I presented a case of congenital dislocation of the lens in both eyes with an absence of the iris. A few weeks ago I saw this same case with interstitial keratitis. I believe that this lens difficulty might be considered of possible luetic origin. I should hate very much to give a large dose of salvarsan or neosalvarsan in a case of optic neuritis with or without atrophy. I am not certain of just the method of production of this neuritis (best 606 or neosalvarsan) i. e., if it is due to a rapid liberation of the spirochaeta or from the intoxication of the arsenic. but in the personal experience with salvarsan, a case of optic neuritis following its use developed, which remained permanent. Within the last few months I have seen two cases of sudden loss of vision in one eye where there was no condition (abnormal) to be discovered. A Wassermann examination in each of these cases proved positive, and in all probability the eye lesions were a part of a specific involvement of the central nervous system.

Dr. Edlavitch: It would seem to me that in specific lesions of the eye that examination of the cerebrospinal fluid would be of importance. In most of these lesions there is usually involvement of the central nervous system. One point of special importance in an examination of this kind is, that you can have a central nervous system lesion with an eye involvement where it would be dangerous to use salvarsan or neosalvarsan. Brynes mercurialized serum would be of service in a case of this nature.

Dr. Senseny (in closing): My personal experience with mercury has been the same as that of Drs. Bulson and Wheelock. I have had the best results by

inunction. There has been a number of cases of optic atrophy improved by salvarsan injection, but this improvement has never been marked.

Dr. Beall presented the case history and specimen of the uterus of a cesarean section done for an intraligamentous fibroid.

Dr. Duemling reviewed the operative technic used in this case.

Dr. Rothchild: I do not want to be misunderstood, but I wish to make a plea for the early diagnosis in cases of this kind. We should see all of our cases before the advent of labor, and conditions of this kind might be corrected.

Motion of last week that the secretary receive $125.00 per annum taken up for consideration. Motion carried that this motion be layed on the table until after the report from Mr. Garmier was received. Motion that Dr. Rothchild be appointed as a committee of one to interview Mr. Garmier to take the proceedings of this society for four meetings and charge for his services, and render an estimate of the probable cost of his services, such services demanding his attendance every Tuesday evening. Seconded. Rising vote; seven for, nine against. Motion lost. Motion to adjourn. Carried.

Meeting of March 30, 1915

Meeting met in regular session in the assembly room of the courthouse, with twenty-six members present. Minutes dispensed with owing to absence of secretary.

No clinical cases.

Regular program, "Is the Diagnosis of Sarcoma Sufficient," by Dr. M. F. Porter.

DISCUSSION

Dr. B. W. Rhamy subscribes to the necessity for accuracy in diagnosis in sarcoma. Malignancy dependent upon the degree of differentiation of cells. Mitotic figures mark malignancy of connective tissue cells. The diagnosis must include origin and type of cell. The term "giant cell sarcoma" is misleading, as it may include growths of different types.

The essayist being called away at this point, the discussion was postponed until the next meeting night.

Adjourned. B. P. Weaver, Secretary pro tem.

DELAWARE COUNTY

The regular meeting of Delaware County Medical Society was held in the Muncie Y. M. C. A. building Friday evening, April 2, and was called to order at 8:15 by President C. Melvin Mix, M.D., twenty-four physicians and three nurses being present.

Dr. F. G. Jackson delivered an address on "The Closed Method in the Treatment of Fractures," saying in part: Medical literature does not tend to encourage the practice of novel methods of treating bone fractures. The so-called open method has its special indications and field of usefulness, but beyond this it has no place. Failure of union is usually due to a dyscrasia rather than to local causes. The closed operation is the method of choice, and no better results with simple fractures occur now than in the days of Gross. The two vital principles in treatment are: fragments must be brought into reasonable apposition and held there, and patient must be comfortable. Improvement in results will not come from any particular change in methods but from improved technic and attention to detail. Daily massage, started about the end of second week, will put the member into earlier use. Temporary dressings are of great importance. I prefer a plaster paris splint made of several layers of bandage carefully adjusted and fitted to the injured part. These are light, strong and easily made. If fracture remains painful and parts swollen after a few days, you may be certain your work has failed at some point. Fixation may be faulty, adjustment may be poor, or soft tissues may be between points of apposition. Good results are favored by administration of anesthesia during diagnosis and fixation.

Dr. R. E. Coe read a paper on "The Roentgen Ray in the Diagnosis and Treatment of Fractures." The following are abstracts: Roentgen ray has enabled diagnosis and treatment of fractures to keep pace with advance in other branches of medicine and surgery. With improved apparatus of to-day it is possible to skiagraph the hip in the fraction of a second. Any derangement of continuity, variety of break, number of fragments, direction of displacement and amount of overlapping is definitely shown, doing away with former errors due to deformites caused by swollen tissues. Many fractures were made worse or complicated in an attempt to make a positive diagnosis, nerves injured and arteries torn. The Roentgen ray has eliminated all this. Many fractures involving the joints, particularly carpal and tarsal, without the accurate diagnosis afforded by Roentgen ray would be treated as sprains. In suspected fracture of vault of skull its use is more rational than cutting down to the bone in search. One is often surprised at the amount of displacement Roentgen ray discloses after a careful reduction and fragments apparently in correct position. After repair by open or closed methods the progress can be noted from time to time and cause for delay ascertained. The Roentgen ray is also of value in treatment of fractures because they are frequently the basis of damage suits.

Dr. E. V. Boram opened the discussion and was followed by Drs. Kemper, Wadsworth, Hill, Spurgeon, Andrews and Mix. Discussion emphasized the fact that Roentgen-ray advantages are not pure and unalloyed. Pictures in the hands of unscrupulous operators and laymen may cause a patient who has a useful and sightly result much distress, the physician much annoyance and perhaps a damage suit because the Roentgen ray shows a large callus, an overlapping or angle that the patient did not suspect and would never have known otherwise. When a physician takes charge of a fracture he should impress the patient with the fact that overlapping and angularity may result and that either may be perfectly compatible with a useful and practical limb.

Adjourned. H. D. Fair, Secretary.

JOHNSON COUNTY

The regular meeting of Johnson County Medical Society was held April 14, 1915, at the mayor's office, Franklin, Ind., President L. L. Whitesides presiding. Seven members present.

Minutes of preceding meeting read and approved.

Dr. L. E. Cox read a paper on "Cerebrospinal Meningococcus Meningitis," with report of a case.

Meeting adjourned to meet the second Wednesday in May — clinical program.

D. R. Saunders, Secretary.

MADISON COUNTY

The Madison County Medical Society held their regular meeting May 4 in the new $130,000 annex of St. John's Hospital, Anderson, the guests of the Sisters of the Holy Cross. This new annex has just been completed.

Dr. W. W. Kneale, president, was in the chair.

Dr. A. W. Collins delivered an address on "Salvarsan: Its Indications and Technic of Administration." Dr. Collins was well fortified on his subject and gave an interesting and instructive talk.

Dr. M. A. Austin spoke on "Roentgen Ray in Surgery," giving a broad synopsis of the subject from the invention of the Roentgen ray to the present time.

Dr. Thomas M. Jones, who has one of the finest and most complete Roentgen-ray equipments in the state, gave a demonstration of Roentgen-ray work which was very greatly appreciated as an instructive feature.

Dr. G. G. Eckhart, councilor from the Eleventh district, and Dr. L. H. Eilman, both of Marion, were visitors; also Dr. S. R. Waters of Middletown.

Application of Dr. Silas J. Stottlemire received and referred to board of censors.

Drs. John W. Cook, Pendleton; Wm. Garretson, Perkinsville, and A. W. Collins, Anderson, were appointed on the committee on legislation for the coming year.

After the business and scientific session the doctors made a tour of inspection of the new annex under the guidance of Sister Louis, superior, and later partook of delicious refreshments.

Adjourned. Benj. H. Cook, Secretary.

SPENCER COUNTY

The Spencer County Medical Society met in regular session with Dr. J. C. Jolly, president, in the chair.

Dr. C. W. Bradley read a paper on "Medical Aspect of Intestinal Stasis Relative to Cause and Treatment." In part he said that the trouble was brought on by neglect of the laws of hygiene. 50 per cent. of cases were not of a disease condition. In considering causes we should be very careful to find what produces the condition, among which is indigestion from imperfect stimulation of intestines. Treatment: Regulate habit of stool, perfect mastication of food, and the use of white liquid petroleum.

Dr. McClarey stated that he had more trouble with stasis than any other condition he knew of in the practice of medicine. When you want to continue a case for a long period, fail to relieve the bowel, but if you want to get away from a case quick, move the bowel freely and you are relieved.

Vaccines were discussed at some length by the members present who reported very good results in various cases.

On motion it was decided that a fee bill be drawn up and submitted for adoption at our next meeting in April.

Adjourned. H. Q. White, Sec.-Treas.

DELINQUENTS

May 1, 1915

Member	Town	County
D. D. Jones	Berne	Adams
J. E. Bickel	Fort Wayne	Allen
J. Frank Dinnen	Fort Wayne	Allen
Karl C. Eberly	Fort Wayne	Allen
Harry G. Erwin	Hunterstown	Allen
W. C. Farnham	St. Joe	Allen
J. M. Pulliam	Fort Wayne	Allen
W. F. Schrader	Fort Wayne	Allen
E. D. Smith	Fort Wayne	Allen
J. E. Stultz	Fort Wayne	Allen
Noah Zehr	Fort Wayne	Allen
B. Fitzpatrick	Columbus	Bartholomew
C. M. Jackson	Elizabethtown,	Bartholomew
Nellie Greene	Fowler	Benton
L. E. Maddox	Montpelier	Blackford
M. A. Emshwiller	Montpelier	Blackford
John Sellers	Hartford City	Blackford
R. B. Fleeger	Jamestown	Boone
F. P. Lyons	Flora	Carroll
Z. U. Loop	Galveston	Cass
J. J. Grosvenor	Richmond	Clark
Wm. V. Howland	Jeffersonville	Clark
Jas. M. Reynolds	Memphis	Clark
R. S. Taggart	New Washington	Clark
Jas. H. Walker	Henryville	Clark
F. C. Dilley	Brazil	Clay
Gilbert Finch	Center Point	Clay
H. L. Muncie	Brazil	Clay
A. Hamilton	Cartersburg	Clinton
E. R. Luckett	Marengo	Crawford
J. W. Clark	Washington	Daviess
W. B. Deffendall	Washington	Daviess
E. D. Millis	Plainville	Daviess
R. W. Willeford	Washington	Daviess
H. H. Dwyer	Lawrenceburg	Dearborn, O.
J. H. Alexander	Greensburg	Decatur
J. C. Emme	Spencerville	Dekalb
D. M. Hines	Auburn	Dekalb
F. A. King	Garrett	Dekalb
A. E. Vinton	Muncie	Delaware
Fred C. Rust	Holland	Dubois
W. B. Siders	Millersburg	Elkhart
A. P. Hauss, Jr.	New Albany	Floyd
C. M. Coggins	Covington, R. F. D.	Fountain-Warren
A. N. Lakin	State Line,	Fountain-Warren
Byron McCord	Veedersburg	Fountain-Warren
I. D. Garrigues	Brookville	Franklin
H. H. Alexander	Princeton	Gibson
R. A. Cushman	Princeton	Gibson
A. H. Rhodes	Princeton	Gibson
Thos. Aydelotte	Lyons	Greene
B. F. Chambers	Lyons	Greene
E. C. Denny	Scotland	Greene
J. E. Talbott, Jr.	Marco	Greene
J. B. Young	Worthington	Greene
C. H. Tomlinson	Cicero	Hamilton
O. A. Collins	Mohawk	Hancock
S. W. Hervy	Fortville	Hancock
G. D. Baker	Crandall	Harrison
Fred Bierly	Elizabeth	Harrison
J. C. Bottorff	Corydon	Harrison
L. L. Bulleit	Palmyra	Harrison
L. F. Glenn	Ramsey	Harrison
O. R. Myer	Lanesville	Harrison
F. E. Wolfe	Corydon	Harrison
Z. C. Wolfe	Corydon	Harrison
Chas. E. Grayston	Huntington	Huntington
J. W. Kemp	Roanoke	Huntington
C. C. Bitler	North Madison	Jefferson
Minor Miller	North Madison	Jefferson
Chester Demaree	Trafalgar	Johnson

Member	Town	County
D. R. Goode	Greenwood, R. R.	Johnson
L. B. Staley	Bicknell	Knox
Chas. W. Dancer	Stroh	Lagrange
J. A. Chevigny	Dyer	Lake
Clara Faulkner	Hobart	Lake
G. W. Gannon	Gary	Lake
M. A. Given	East Chicago	Lake
H. C. Groman	Hammond	Lake
R. P. Hale	East Chicago	Lake
B. M. Jewell	Hammond	Lake
R. W. Johnson	Lowell	Lake
L. H. Kelly	Hammond	Lake
Dwight Mackey	Hobart	Lake
R. C. Mackey	Hobart	Lake
W. H. Mikesch	Hammond	Lake
A. G. Schlieker	East Chicago	Lake
E. D. Skeen	Gary	Lake
O. C. Wick	Gary	Lake
Robt. L. French	Union Mills	Laporte
Abby May Henderson	Kingsbury	Laporte
Robt. Henderson	Kingsbury	Laporte
J. S. Martin	Rolling Prairie	Laporte
Nellie Cole Reed	Michigan City	Laporte
W. W. Ross	Laporte	Laporte
Wm. Walkinshaw	Stillwell	Laporte
J. E. Whitehill	Rolling Prairie	Laporte
J. R. Andrews	Riverdale	Lawrence
Thos. W. Bullitt	Riverdale	Lawrence
Jas. D. Byrns	Mitchell	Lawrence
H. W. Gante	Anderson	Madison
J. T. Newhouse	Chesterfield	Madison
F. W. White	Brewersville, R. F. D. 1	Madison
Noah S. Woods	Reelsville, R. F. D. 1	Madison
A. L. Barnes	Southport	Marion
L. W. Barry	Indianapolis	Marion
D. F. Berry	Indianapolis	Marion
J. H. Ford	Indianapolis	Marion
C. R. Gutilius	Indianapolis	Marion
G. W. Kohlstaedt	Indianapolis	Marion
J. F. McCool	Indianapolis	Marion
Chas. McNaull	Indianapolis	Marion
C. L. Marlatt	Indianapolis	Marion
H. C. Parker	Indianapolis	Marion
W. E. Pennington	Indianapolis	Marion
F. L. Pettijohn	Indianapolis	Marion
T. O. Redden	Indianapolis, R. F. D. 10	Marion
Simon Reisler	Indianapolis	Marion
O. W. Ridgeway	Indianapolis	Marion
G. S. Row	Indianapolis	Marion
Irvin H. Sonne	Indianapolis	Marion
John Spaulding	Dillsboro	Marion
C. E. Stephenson	Indianapolis	Marion
A. L. Wilson	Indianapolis	Marion
E. E. Wishard	Indianapolis	Marion
Geo. L. Marshall	Bourbon	Marshall
F. E. Radcliffe	Bourbon	Marshall
T. C. Dollens	Trinity Springs	Martin
Geo. M. Freeman	Shoals	Martin
J. B. Peters	Macy	Miami
Geo. E. Clements	Crawfordsville,	Montgomery
R. R. Pollom	Darlington	Montgomery
K. K. Straughan	Waveland	Montgomery
M. F. Brackney	Mooresville	Morgan
Earl K. Pfaff	Mooresville	Morgan
Wm. L. Thompson	Mooresville	Morgan
H. D. Luse	Ligonier	Noble
Chas. L. Boyd	Paoli	Orange
S. L. Lingle	Paoli	Orange
Thos. B. Ritter	Orleans	Orange
Jas. T. Hazel	Freedom	Owen
A. C. Kennedy	Patricksburg	Owen
Fred V. Stucky	Gosport	Owen
F. A. Williams	Quincy	Owen
A. A. Williamson	Marshall	Parke-Vermillion
M. F. Woodard	Bloomingdale	Parke-Vermillion
W. J. Cluthe	Evansville	Perry
H. S. Dome	Tell City	Perry
W. T. Blythe	Glezen	Pike
R. W. Harris	Algiers, R. F. D. 9	Pike
T. D. McGlasson	Winslow	Pike
F. W. Mitchell	Valparaiso	Porter
C. B. Moser	South Bend	Porter
C. P. Barrett	Mt. Vernon	Posey
S. W. Boren	Poseyville	Posey
Thos. J. Hall	Mt. Vernon	Posey
John R. Ranes	Mt. Vernon	Posey
Henry H. Sugg	Mt. Vernon	Posey
J. E. Cullipher	New Maysville	Putnam
John F. Cully	Bainbridge	Putnam
Emerson Barnum	Manilla	Rush
H. H. Elliott	Rushville	Rush
C. S. Hougland	Milroy	Rush
A. G. Shauck	Arlington	Rush
Chas. H. Perry	Lewis Creek	Shelby
D. A. Pettigrew	Star City	Shelby
F. E. Ray	Shelbyville	Shelby
S. L. Strickler	Boggstown	Shelby
M. M. Wells	Fairland	Shelby
H. A. Fink	South Bend	St. Joseph
Frank H. Foster	New Carlisle	St. Joseph
P. C. Travers	South Bend	St. Joseph
A. W. Hadley	Pleasantville	Sullivan
T. W. Kennedy	Sullivan	Sullivan
E. DeBaun Thixtun	Indianapolis	Marion
Ernest S. Baker	Lafayette	Tippecanoe
R. V. Hannell	Lafayette	Tippecanoe
Henry M. Mugg	Clark's Hill	Tippecanoe
E. B. Moser	Windfall	Tipton
Geo. H. Warne	Hobbs	Tipton
J. N. Baughman	Evansville	Vanderburg
M. J. Compton	Evansville	Vanderburg
David A. Cox	Evansville	Vanderburg
W. A. Fritsch	Evansville	Vanderburg
J. N. Jerome	Evansville	Vanderburg
T. H. Taylor	Evansville	Vanderburg
E. J. Verwayne	Evansville	Vanderburg
D. A. Bethea	Terre Haute	Vigo
Jas. E. Elliott	Terre Haute	Vigo
J. O. Garrigus	Terre Haute	Vigo
J. R. Gillum	Terre Haute	Vigo
Jas. McCall	Terre Haute	Vigo
F. W. Shaley	Terre Haute	Vigo
S. D. Weir	Terre Haute	Vigo
J. P. Worrell	Terre Haute	Vigo
Frank H. Bent	Kokomo	Wabash
Geo. W. Grossnickle	Elkhart	Wabash
Wm. R. Boggs	Indianapolis, R. D. 29	Washington
Mary E. Phelps	Newburg	Warrick
A. J. Blickenstaff	Wolcott	White
Walter McBeth	Burnettsville	White
M. W. Webster	South Whitley	Whitley
R. S. White	Columbia City, R. F. D. 5	Whitley

MOVED TO OTHER STATES

Member	Town	State
Olive Wilson	Paragould	Ark.
C. A. Johnson	1501 5th Ave., Los Angeles,	California
Moses Thorner	420 Gross Building, Los	Angeles, Cal.
David C. Dome	Sacramento	Cal.
J. T. Bolin	Claremont	Cal.
Jno. W. Coleman	St. Petersburg	Florida
D. C. Roney	Orlando	Florida
Samuel B. Westlake	East St. Louis	Ill.

Member	Town	State
D. J. Hale	College Springs	Iowa
J. R. Hume	New Orleans	La.
H. R. Minnick	Wellston	Mich.
Jas. W. Huffman	Leadwood	Mo.
A. G. Pohlman	1402 S. Grand Ave.	St. Louis, Mo.
B. E. Malone	Columbus	Mont.
C. M. Sautter	N. Y. Eye and Ear Infirm.	New York City
H. E. Ward	Custar	Ohio
A. C. Bartholomew	Van Wert	Ohio
E. B. Markey	Hamilton	Ohio
J. B. Shannon	Platter	Okla.
B. Z. Cashman	New Oxford	Pa.
Clark Cook	Memphis	Tenn.
Karl Brown	Dallas	Texas
J. H. Lail	Seattle	Wash.
A. H. Andrus	Markesan	Wis.

MOVED TO ADDRESS UNKNOWN

Wm. H. Gilbert.....
J. R. Lang.....
Eva J. Burton.....
E. M. Bennett.....

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Standard Radium Solution for Drinking.—A solution of 2 micrograms of radium and 1.3 mg. barium chloride per bottle of 60 c.c. For "Actions and Uses" see the article on radium in New and Nonofficial Remedies. In view of the small barium content, it is claimed that the physiologic action of barium may be ignored. The Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, April 17, 1915, p. 1325).

Standard Radium Solution for Bathing.—A 5.2 per cent. barium chloride solution containing radium chloride equivalent to 4.2 micrograms of radium per bottle. For "Actions and Uses" see the article on radium in New and Nonofficial Remedies. The barium in the solution is said to have no effect. The contents of a bottle, containing 4.2 microcuries or 10,000 Mache units are used for a bath. The Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, April 17, 1915, p. 1325).

Standard Radium Earth.—A mixture consisting chiefly of silica and small quantities of carnotite, 450 gm. containing 0.45 micrograms of radium in the form of radium sulphate. For "Actions and Uses" see the article on radium in New and Nonofficial Remedies. For use the earth is mixed with water and heated for a time. The Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, April 17, 1915, p. 1325).

Standard Radium Compress.—A compress containing 225 gm. of a mixture consisting chiefly of silica and barium sulphate containing radium sulphate equivalent to 15 micrograms of radium. For "Actions and Uses" see the article in New and Nonofficial Remedies on radium. Being applied wet, it is claimed that the action is partly due to beta and gamma radiation of the radium salt and partly to the radium emanation which is dissolved out by the water. The Radium Chemical Co., Pittsburgh, Pa. (*Jour. A. M. A.*, April 17, 1915, p. 1325).

PROPAGANDA FOR REFORM

Peacock's Bromides.—A report of the Council on Pharmacy and Chemistry points out that Peacock's Bromides (The Peacock Chemical Co.), said to contain the bromides of potassium, sodium, ammonium, calcium and lithium equivalent to 15 grains of potassium bromide per fluidram, is secret in composition in that the amounts of the individual bromides are not stated. The report contradicts the asserted uniformity of the preparation and the claim of superiority. It questions the asserted advantage of a mixture of bromides over a simple bromide solution and holds that, if there were any advantages in prescribing such a mixture of bromides, the physician should regulate their proportions. The report further points out that the therapeutic claims are misleading and not in accordance with modern teachings and practice. Thus while the Peacock company advises the liberal use of bromides in the treatment of epilepsy, the best clinical teaching advises the avoidance of bromides as far as possible (*Jour. A. M. A.*, April 3, 1915, p. 1177).

Chionia.—A report of the Council on Pharmacy and Chemistry discusses the claims made for Chionia (The Peacock Chemical Co.), said to be "A Preparation of Chionanthus Virginica"—a drug which is generally conceded to be worthless and which has been the subject of an unfavorable report by the Council. While claiming Chionia to be a "potent hepatic stimulant," the exploiters appear to appreciate its inefficiency, for it is advised to combine the nostrum with drugs of recognized potency, such as the heart tonics and laxatives in passive congestion of the liver, mercurial purge, podophyllin or sodium phosphate in "Biliousness," etc. (*Jour. A. M. A.*, April 3, 1915, p. 1178).

Dr. May's Formula.—Dr. May's Formula, formerly called May's Epilepticide, is sold on the mail order plan by Dr. W. H. May Medical Laboratory, New York. Examination in the A. M. A. Chemical Laboratory indicated that this "epilepsy cure" contains ammonium bromide and sodium bromide as the essential constituents, the bromide content being equivalent to 15 grains of potassium bromide per fluidram (*Jour. A. M. A.*, April 3, 1915, p. 1178).

Hagee's Cordial.—The Council on Pharmacy and Chemistry reports that Hagee's Cordial of the Extract of Cod Liver Oil Compound (Katharmon Chemical Co.) has neither the nutritive qualities nor the reconstructive efficacy of cod liver oil and that it is worthless for the conditions for which it is advertised. Recent experiments having shown that cod liver oil, like butter and egg yolk, possesses certain growth-promoting properties not found in some other fats, the promoters of Hagee's Cordial claim these properties of cod liver oil for their extract. The Council has previously expressed the opinion that cod liver oil owes its value in the main or entirely to its fatty constituents. Now the Connecticut Agricultural Experiment Station has demonstrated that the growth-promoting properties of cod liver oil are not to be found in Hagee's Cordial (*Jour. A. M. A.*, April 10, 1915, p. 1262).

Wampole's Preparation.—Wampole's Perfected and Tasteless Preparation of an Extract of Cod Liver (H. K. Wampole Co., Inc.) is marketed under a nonquantitative and therefore practically worthless statement of composition. Experiments carried out at the Connecticut Agricultural Experiment Station have demonstrated that the Wampole preparation, which also contains extract of malt and sugar, does not possess the advantages over ordinary cod liver oil as a source of nutriment, as claimed. Neither did the Wampole preparation appear to possess to any marked degree the reconstructive properties of cod liver oil, butter fat and egg yolk. The Council on Pharmacy

and Chemistry held Wampole's Perfected and Tasteless Preparation of an Extract of Cod Liver ineligible for New and Nonofficial Remedies because, contrary to claim, it lacks both the nutritive and reconstructive properties of cod liver oil, and because it is marketed under an indefinite name and under unwarranted claims (*Jour. A. M. A.*, April 10, 1915, p. 1262).

The Electro-Chemical Ring.—A postoffice fraud order has put a stop to the sale of this silly contrivance. This ring, put on the market by the Electro-Chemical Ring Co., Toledo, O., was found to be made of ordinary iron. It was claimed to cure diseases caused by acid in the blood, among which were stated to be Bright's disease, diabetes, epilepsy and cataract (*Jour. A. M. A.*, April 10, 1915, p. 1263).

Dr. Croney's Specific for Epilepsy.—This epilepsy "cure" is sold on the mail-order plan by Dr. James T. Croney of Columbus, O. Examination in the A. M. A. Chemical Laboratory showed it to be a solution containing ammonium bromide and potassium bromide as essential constituents, containing bromide equivalent to 16.9 grains potassium bromid per dose of two teaspoonfuls (2 fluidrams). Like other epilepsy "cures," Croney's Specific for Epilepsy is a bromide mixture and is both worthless and dangerous (*Jour. A. M. A.*, April 17, 1915, p. 1344).

The Quality of Blaud's Pills.—An examination of the various brands of Blaud's pills supplied by manufacturing houses, made in the A. M. A. Chemical Laboratory, refutes the commonly assumed instability of ready made Blaud's pills. On the other hand it is shown that the Blaud's pills of the market are not very reliable as to the amount of iron present, the variation ranging from 77 to 183.2 per cent. of the claimed amount of ferrous carbonate. The different brands also differed widely in their ease of disintegration. The special forms, such as the "nascent" preparations, the "soft mass" pills and the gelatin encapsulated oily suspension, sold as "Frosst's Blaud Capsules," showed no advantage over the ordinary kind (*Jour. A. M. A.*, April 17, 1915, p. 1344).

Lactobacilline Omitted from N. N. R.—The Franco-American Ferment Co. is offering its Lactobacilline preparations direct to the public. The company has distributed circulars in which the public is informed that auto-intoxication is the cause of innumerable ills, that the Bulgarian bacillus is a "wonderful corrective or remedy" for such conditions and that the Lactobacilline products and — by inference — the only reliable products. In view of the action of the Franco-American Ferment Co. and the tendency to cause the public to exaggerate slight ailments into alarming conditions, the Council on Pharmacy and Chemistry has deleted the Lactobacilline products from New and Nonofficial Remedies (*Jour. A. M. A.*, April 17, 1915, p. 1346).

Olivine.—Olivine was a liquid soap put on the market by the To-Kalon Manufacturing Co., Syracuse, N. Y. It was declared misbranded under the Federal Food and Drugs Act because, contrary to claim, it was not made from olive oil, because boro-glycerine was absent and because it had neither antiseptic nor germicidal action (*Jour. A. M. A.*, April 17, 1915, p. 1346).

Freckeless.—Freckeless, J. E. Barry, Paris, Texas, was sold for the removal of freckles, sunburn, tan, etc. It was found to be a petrolatum ointment of bismuth subnitrate and ammoniated mercury. Freckeless was declared misbranded under the Foods and Drugs Act because it was not harmless as claimed and because it was not a skin food, as claimed (*Jour. A. M. A.*, April 17, 1915, p. 1346).

Veracolate. — The Council on Pharmacy and Chemistry reports that "Veracolate (plain)" (The Marcy Co., Boston, Mass.) is semi-secret in composition, unscientific in combination and exploited under unwarranted claims. It reports that the same criticisms apply to "Veracolate with Pepsin and Pancreatin" and "Veracolate with Iron, Quinine and Strychnine." For "Veracolate (plain)" the following nonquantitative formula is given: "A compound containing the bile acids, sodium glycocholate, sodium taurocholate with cascara sagrada and phenolphthalein." "Veracolate with Pepsin and Pancreatin" is said to contain, in addition to the indefinite "Veracolate," the two mutually incompatible ferments, pepsin and pancreatin, and oil of peppermint. The complexity of "Veracolate with Iron, Quinine and Strychnine" has increased so that this unscientific mixture is claimed to contain seven constituents. These products are discreditable to the medical and pharmaceutical profession alike and their use is against the public good (*Jour. A. M. A.*, April 24, 1915, p. 1440.)

Taurocol.—The Paul Plessner Co., Detroit, Mich., markets Taurocol and Taurocol Compound Tablets. The company makes a pretense of giving the formula — minus any quantities — thus: "Taurocol is a combination of bile salts, extracts of cascara sagrada phenolphthalein and aromatics." Taurocol Compound Tablets are said to contain, in each, "Taurocol (Bile Salts)" gm. .1296, "Pepsin 1-3000" gm. .0324, "Pancreatic Ext." gm. .0324, "Extract Nux Vomica" gm. .0081 and "Aromatics" q. s. The Council on Pharmacy and Chemistry points out that the composition and the therapeutic properties claimed for the preparations are essentially the same as those claimed for Veracolate and Veracolate with Pepsin and Pancreatin. It reports that the objections made to these also apply to Taurocol and Taurocol Compound Tablets (*Jour. A. M. A.*, April 24, 1915, p. 1441).

The Converse Treatment.—This is a Columbus, Ohio, epilepsy "cure." An examination in the A. M. A. Chemical Laboratory showed that each 100 c.c. contained 7.3 gm. ammonium bromide, 5 gm. calcium bromide and 8.7 gm. potassium bromide, the bromide content being equivalent to 14.5 gm. potassium bromide per fluidram (one teaspoonful). Despite this bromide content the exploiters have in the past stated the epilepsy cures containing bromides "tend to aggravate the trouble in the long run" (*Jour. A. M. A.*, April 24, 1914, p. 1441.)

BOOK REVIEWS

The Medical Epitome Series. Pediatrics. A Manual for Students and Practitioners. By Henry Enos Tuley, A.B., M.D. Second revised edition including a selected list of State Board Examination Questions. Illustrated with thirty-three engravings. Lea & Febiger, Philadelphia and New York. Price, $1.00.

The discoveries and advances in diseases of children has necessitated a revision of this volume of the Medical Epitome Series. The man, Dr. Tuley, entrusted with this task has accomplished a difficult feat in including the important advances, retaining all that was good in the first edition and yet keeping the volume small. Physicians and students will find this volume fully up to the standard of the first edition.

Infant-Feeding; Its Principles and Practice. By F. L. Wachenheim, M.D., Attending Pediatrist, Sydenham Hospital and Mount Sinai Dispensary, New York City. Lea & Febiger, Philadelphia and New York, 1915.

To the practitioner who attempts, from current literature, to keep up with the present theory and practice of infant feeding, the subject must certainly seem to be in a state of chaos. The author of this book has sifted this literature and put the knowledge gained, leavened with his experience, into practical and available form. Some conception of the magnitude of the task may be realized from the extensive references which includes over five hundred articles. This, however, need not frighten the prospective reader as useless discussions are entirely eliminated and the subject is presented in as near a text-book form as it is possible.

The Curative Action of Radium. By Sigm. Saubermann, M.D., of Vienna and Berlin. Fifty pages with thirty-five half tone illustrations. Published by Radium Limited, U. S. A., 25 West 45th Street, New York, N. Y.

Dr. Saubermann is one of Europe's greatest authorities on the Radium Emanation Therapy, and in this booklet he voices the results of his research work covering a period of over eleven years. It is of great interest to all physicians desirous of using radium emanation in treating these diseases which it influences.

The thirty-five illustrations contained are in all probability the first of their kind ever shown in this country and demonstrate clearly the effects of the rays and emanation of radium.

The booklet will be sent free to our readers on application to the publishers by mentioning the name of the Journal of the Indiana State Medical Association.

Progressive Medicine for December, 1914. Lea and Febiger; quarterly digest of advances, discoveries and improvements in medical and surgical sciences; edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia.

Little need be said, in an introductory way, of Progressive Medicine. The December issue of this quarterly journal fully measures up to the standard of its predecessors. This volume takes up diseases of the digestive tract and allied organs, diseases of the kidneys, genito-urinary diseases, surgery of the extremities, shock, anesthesia, infections, fractures and dislocations, tumors, and concludes with a practical therapeutic referendum.

Everything new and of scientific interest coming under these different headings, is discussed in a very interesting and attractive manner. To the writer, no work of reference excells this publication.

Manual of Obstetrics. By Edward P. Davis, A.M., M.D., Professor of Obstetrics in the Jefferson College, Philadelphia. 12mo of 463 pages, 171 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $2.25. net.

This book occupies a position between the text-book and the epitome of obstetrics. The important points in the art of obstetrics are given in sufficient detail so that the practitioner can use it as a guide. The object of the work is primarily to help the general practitioner and medical student to study obstetric diagnosis from the clinical standpoint, and to learn how to make wise decisions in treatment. The illustrations are good. The text is clear and concise, and the indications for treatment and interference plainly stated. However, there occurs at least twice a statement which hardly meets with the approval of the majority of obstetricians, and that is that ergot may be given with advantage before the delivery of the placenta, after normal delivery and after forceps delivery.

Practitioners and medical students particularly will find the book of much value.

Diseases of the Skin, Including the Acute Eruptive Fevers. By Frank Crozer Knowles, M.D., Instructor in Dermatology in the University of Pennsylvania; Clinical Professor of Dermatology, Women's Medical College of Pennsylvania; Fellow of the College of Physicians of Philadelphia, etc. Octavo, 546 pages, with 199 engravings and 14 plates. Cloth, $4.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

This work has much to commend it. It is exceedingly well written and the illustrations splendid. The book is not burdened with the countless prescriptions, useful and otherwise, usually included in the treatment of skin diseases. Only those therapeutic measures which have been found by the author to be most useful have been given.

The section devoted to syphilis is very good. The illustrations presented and the different types of syphilides are ample to give the reader a clear idea of the skin lesions of this disease. The inclusion of a detailed description of the Wassermann reaction makes this chapter, to the reviewer, a shade better than any other in the book.

The subject matter is well arranged and the book is gotten up in a very attractive manner.

A Treatise on Clinical Medicine. By William Hanna Thomson, M.D., LL.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College. Octavo volume of 667 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.00. Half Morocco, $6.50.

A work based on many years of clinical experience by a competent observer must contain many valuable points on the diagnosis and treatment of disease, and Dr. Thomson's book is not in any way an exception to this rule.

One is struck with many points in treatment which are rather unusual; for instance, the statement that a combination of Dover's powder, phenacetin, aconite and quinin is a specific for influenzal infection and that it is quite as efficient as the use of quinine in the treatment of malaria, is, to say the least, a rather startling thing, in view of the almost universal statement of recent standard texts on the subject of medicine that there is no specific treatment for influenza.

The book contains a chapter on the consideration of some of the important symptoms of disease from a diagnostic standpoint, and is very well written. All things considered the work of Dr. Thomson is a very clear and concise text on clinical medicine and is a valuable addition to one's library.

Nervous and Mental Diseases. By Joseph Darvin Nagel, M.D., Consulting Physician to the French Hospital of New York; Member of New York Academy of Medicine, Honorary Member Societe Royal de Belique, etc., Physician to St. Chrysostom's Dispensary. New (2d) edition, revised and enlarged, 12mo, 293 pages, with 50 engravings and a colored plate. Cloth, $1.00 net. (The Medical Epitome Series.) Lea & Febiger, Publishers, Philadelphia and New York, 1914.

The mere acceptance of the monumental task of collating and digesting the immense volume of material of nervous and mental diseases commands attention, while Dr. Nagel's marked success in the formidable undertaking is a fitting culmination to such an effort.

The undergraduate who masters this compact volume will find himself possessed of a thorough grasp of the fundamentals, while the busy practitioner will find in it a most useful aid to memory. The sets of questions reviewing each chapter are supplemented by a list of questions selected from recent state board examinations, which will be most valuable to the student who desires to test his own knowledge or to prepare for examination.

Dietetics or Food in Health and Disease. By William Tibbles, LL.D., M.D. (Hon. Causa), Chicago; L.R.C.P., Edin.; M.R.C.S., Eng.; L.S.A., London. Lea & Febiger, Philadelphia and New York, 1914.

This work is divided into two parts. Part I deals with dietetics in Health. The composition, heat value, and digestibility of the various foods is discussed. Two very instructive chapters are those on feeding of infants and children, and food in old age. The next chapter of this part is one which physicians generally will welcome as a thorough discussion is given of various special diets, such as vegetarianism, the fruitarian diet, fruit cures, zomotherapy, meat diet, the different meat diets, nitrogen-free diet, purin-free diet, fat-free diet, salt-free diet, cellulose diet, dry diet, over- and under-feeding cures, Fletcherism. The value of this chapter lies not only in the details of what these special diets are but in a fair presentation of their practical value and the conditions in which they are useful.

Part II discusses fully dietetics in disease, not only in disease of the digestive system but in disease of each of the organs of the body. The book closes with an excellent summary of the knowledge that is at present available on the vitamines and the deficiency diseases.

Cancer, Its Cause and Treatment. By L. Duncan Bulkley, A.M., M.D., Senior Physician, The New York Skin and Cancer Hospital. 8vo., cloth, 224 pages. $1.50 net. Paul B. Hoeber, publisher, New York, N. Y.

This book presents the anomalous views of its author concerning the cause and treatment of cancer. Dr. Bulkley uses much space in showing that the occurrence of cancer is closely related to the eating of meat and concludes that "The exclusion of almost every other possible cause of cancer, as well as the pathological history, leads to deranged metabolism as the only remaining etiological element." The author maintains that for the proper treatment "it is absolutely necessary to maintain a perfect vegetarian diet, which includes even the exclusion of eggs and milk." While conceding that surgery has a function to perform in removing carcenomatous growths, he laments the fact that "dietetic and medicinal treatment of cancer, in the fullest sense, have never been given a fair and fully intelligent trial." Dr. Bulkley is certainly giving a stimulus to the non-operative treatment of cancer when he dares to state that "For many years in early cancer of the breast, under proper, general, dietetic, hygienic and medicinal treatment, I have seen the lump vanish under the continued application of the iodide of lead in Hebra's diachylon ointment."

This book will add no luster to the fairly distinguished name of L. Duncan Bulkley and will be productive of more harm than good.

A Treatise on Diseases of the Skin, for the Use of Advanced Students and Practitioners, by Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Seventh edition, thoroughly revised. Octavo of 1,250 pages, with 334 text-illustrations, and 33 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company. Cloth, $6 net; half morocco, $7.50 net.

Early editions of this masterly book have been thoroughly reviewed in The Journal, so it scarcely seems needful to give this edition extended consideration. In the preparation of this book the author's predominant aim was to present the practical side of dermatology to those engaged in general practice, and how well he succeeded is evidenced by the fact that seven editions have been demanded in twelve years.

This revision has been very extensive. Descriptions of prurigo nodularis, granuloma pysgenicum, benign sarcoid, and keratosis blennorrhagica are presented for the first time, while the sections devoted to syphilis, sporotrichosis, pellagra, ring-worm and tropical affections have been considerably enlarged and rewritten. The value of the book has been enhanced by the addition of forty new cuts.

One turns with interest to the chapter on syphilis to learn the author's opinion of the recent additions to the therapy of this disorder. His view of the salvarsan treatment is summed up as follows: "It would seem for the average case, when seen for the first time after the chancre has well developed and too late to abort the disease, that for the present the mercurial treatment would be the one of choice." When a case is seen early the author advises excision of the initial lesion and the administration of a full dose of salvarsan. He takes a conservative view of the value of the Wassermann test in the diagnosis of syphilis.

This work certainly can be recommended to any one desiring a modern treatise on diseases of the skin.

Practical Therapeutics. With Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College of Philadelphia. New (15th) edition, thoroughly revised and rewritten. Octavo, 998 pages, with 144 engravings and 7 plates. Cloth, $4 net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

A review of this well-known text-book seems superfluous. For a great many years Hare's Text-Book on Practical Therapeutics has been a standard for a very large number of appreciative teachers and readers. The fact that the book has gone through fifteen editions, always with an increasing demand for it, is testimony of merit.

Aside from the fact that this present volume, representing the fifteenth edition, has been rewritten and much material added, it stands forth as a representative of rational therapeutics based on a definite knowledge of cause and effect. To meet present-day knowledge and standards new material has been added concerning the administration and effect of salvarsan, neosalvarsan, tuberculin, anesthetics, digitalis and other cardiac drugs.

The five pages devoted to Vaccine Therapy are disappointing, and yet in view of the general skepticism prevailing as to the real value of vaccine treatment, except in a limited number of conditions, perhaps it is just as well to dismiss the subject with brevity and no definite opinion as to therapeutic results.

The general arrangement, in which a little over half of the book is devoted to drugs and other remedial measures and their use, and the balance of the book to a discussion of the treatment of various diseases, the names of which are arranged in alphabetical order, will be appreciated by the reader who desires a ready reference. The tables devoted to dosage and the index of diseases and remedies add to the value of the work.

As usual, the publisher's work has been well done, and all in all the book deserves the very high place it has secured in the estimation of progressive physicians.

Pathological Technique. Including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, M.D., Associate Professor of Pathology, Harvard Medical School; and J. H. Wright, M.D., Pathologist to the Massachusetts General Hospital. Sixth edition, revised and enlarged. Octavo of 536 pages with 174 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $3.00.

Few physicians making laboratory work a specialty would think of being without this excellent work of Mallory & Wright. If so highly appreciated by laboratory workers it also should be highly appreciated by the general physician who must do a certain amount of laboratory work in order to do justice to himself as well as his patients. In fact some book on pathological technic is indispensable to every progressive and up-to-date physician, and experience with the work of Mallory & Wright leads us to recommend it unreservedly as practical as well as comprehensive, and written with that clearness of expression which leaves no room for misunderstanding.

The part devoted to post-mortem examinations is especially useful and contains two well-written chapters on the external and internal examinations of the body. The second part, devoted to bacteriological methods, and the third, devoted to histological methods, can scarcely be improved on for practical purposes. While they are not exhaustive they give all of the information that is needed for general pathological work.

The fact that six editions of this work have been required in order to supply the popular demand is testimony of the value of the work. This sixth edition, like its predecessors, contains a number of additions, including Bielschowsky's silver impregnation stain for nerve-fibers and for connective-tissue fibrils and reticulum; Bensley's methods for the demonstration of mitochondria and other cytoplasmic granules, especially in the cells of the pancreas; Herxheimer's alcohol-acetone solution for staining fat; the complement-fixation test for gonorrheal infection; Lange's colloidal gold test for syphilis of the central nervous system; the complement-fixation test for echinococcus cyst; and Eyenes and Sternberg's silver impregnation method for staining the treponema pallidum in sections. Short sections, descriptive of the bacillus of pertussis, of the blastomyces, and the sporothrix schenckii have also been inserted. As in previous editions, the authors designate and describe fully the more useful and reliable methods. The work is in every way deserving of high praise.

A Text-Book of The Practice of Medicine. For Students and Practitioners. By Hobart Amory Hare, B.Sc., M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; one time clinical Professor of Diseases of Children in the University of Pennsylvania. Third edition, revised and enlarged. Imperial octavo, 969 pages, with 142 engravings and 16 plates in colors and monochrome. Cloth, $6.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

As has been said by the author in the preface, "Only those who keep themselves thoroughly abreast of all departments of medical endeavor can estimate what the changes have been in the conception of almost every disease as to etiology, pathology, and symptomatology, not to speak of treatment. Furthermore, only those who keep themselves thoroughly well informed can be as optimistic in regard to our struggle with disease as the nature of the advances justify. Every year sees an increasing army of investigators in physiology, pathology, bacteriology, protozoology, and therapeutics, meeting with occasional reverses, but as a whole moving onward to clearer ideas concerning some of the problems which but a short time ago seemed quite beyond hope of elucidation." It is fortunate that the book-buying medical man is able to procure a work that is so thoroughly trustworthy in its relation to the latest, most comprehensive and dependable information as this well-known work by Hare on the Practice of Medicine. The author has succeeded, by concise expression, in presenting in one volume the essential facts in the practice of medicine. As stated by the publishers, Dr. Hare's insight into the needs and problems of the man in general practice, and his ability to supply the exact information required, in the form in which it is available for instant use, are elements which give this work a distinctive value.

The advances in medicine have made it necessary to practically rewrite this third edition and it has been done in that thorough and authoritative way so characteristic of Dr. Hare's writings. While it is possible to offer some criticism, as for instance in the failure to give proper consideration to the treatment of syphilis of the nervous system by intraspinal injections of mercurialized serum or neosalvarsanized serum, yet what book is not open to minor criticisms in view of our rapidly advancing knowledge of the etiology, pathology, and therapy of many disease conditions. So far as we know this book at the present writing, is, as a text-book on the Practice of Medicine, the best — very largely because it is one of the latest productions of its kind and by an author of unquestioned ability and recognized as an authority.

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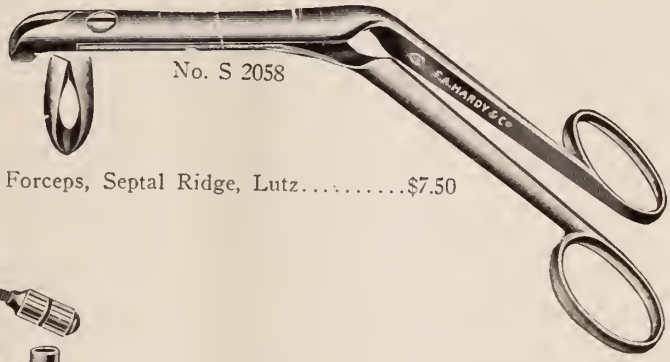

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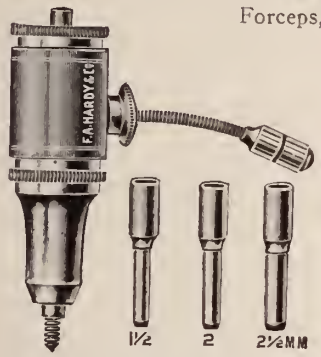

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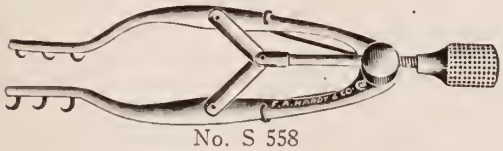

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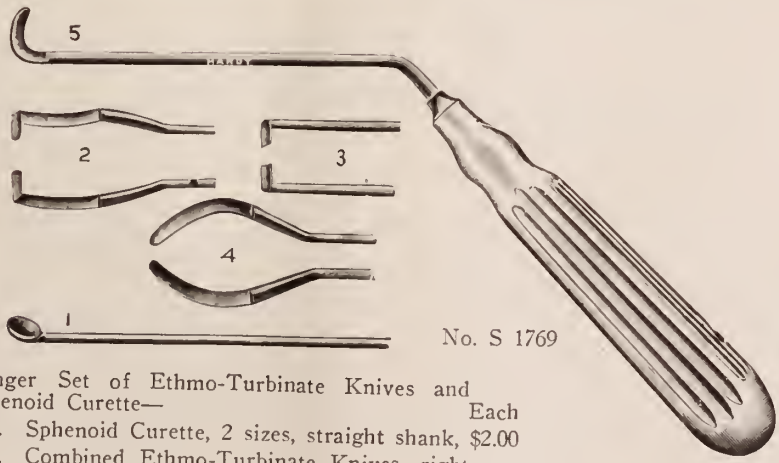

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THE JOURNAL

OF THE

Indiana State Medical Association

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Professor of Gastro-Enterology in the Detroit College of Medicine and Surgery; Consulting Gastro-Enterologist to Harper Hospital, Detroit

Octavo, 780 pages, with 154 engravings, 48 roentgenograms, and 8 colored plates. Cloth, $6.00, net.

The author has made available in this volume all that modern research and improved facilities for observation have added to the store of useful knowledge in this field. He has, however, eliminated all abstract theories, and presents only the practical, proven and helpful.

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Next Annual Session, Indianapolis, September 23 and 24, 1915

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VOLUME VIII FORT WAYNE, IND., JUNE 15, 1915 NUMBER 6

ORIGINAL ARTICLES

EDUCATION OF THE PUBLIC TO THE EARLY RECOGNITION OF CANCER OF THE UTERUS *

BERNAYS KENNEDY, M.D.
Associate Professor of Gynecology, Indiana University School of Medicine
INDIANAPOLIS

The official title of this paper as announced by the secretary is, "Education of the Public to the Early Recognition of Cancer of the Uterus." It would, however, be particularly appropriate, because of the broad scope of the subject and especial application to the functions of women, to change the title to read, "What Every Woman Should Know About Cancer of the Womb."

The purpose for which this paper is prepared leads me to covet that gift of ingenious rhetoric which so magically transforms a mass of dull terms into a revelation of striking facts, at once compelling the attention and permanently fixing the truth in mind. Such a gift would serve humanity by causing the people to receive and retain knowledge, for the want of which they are daily losing their lives, unnecessarily, from the ravages of cancer.

I seek to present only plain proven facts; no theories of cancer are discussed; our ignorance of the cause of cancer is freely admitted; no treatment is advocated save the one which has stood the test of time and experience, viz., complete extirpation in the early stages by a skilful surgeon, and finally the whole object is to disseminate this knowledge in a manner which will bring cancer to operation in the early stages, when it can be positively and permanently cured.

Early diagnosis, then, is the real and practical hope for the cure of cancer. It therefore follows that the people must be informed of the signs and symptoms which should lead them to present themselves early in the course of the disease, for diagnosis. This is no easy problem for the reason that in the early stages the symptoms hardly attract the patient's notice and because of the fact that deficient knowledge of the normal functioning is responsible for women overlooking important symptoms of deep significance; also because of erroneous traditional popular ideas in regard to the symptoms of cancer.

The importance of the subject is deeply impressed on us when we consider the fact that between the ages of 45 and 64, one out of every eleven deaths among women is due to cancer of the uterus or the breast, and of these deaths, two-thirds are from cancer of the uterus.

Time and experience have proven beyond question of doubt that early diagnosis and timely surgery afford a cure in a great percentage of cases. These are all well-known and admitted facts and have been before the profession and have been taught to nurses and midwives for a number of years, and it is due to the failure of securing the successful treatment that should be obtained that the present campaign of education has been proposed. Therefore it seems to me that the subject for the most profitable discussion lies in the consideration of methods of education. In the manner of presenting the subject to the people lies the success or the failure of the movement. The cancer problem is really a problem of how to make medical truths obvious to everyone. What we wish to teach women is to make accurate self observation and precise utterance of symptoms. They should be taught what every woman should know, viz., the function of normal menstruation, certainly of as much

* Read before the Indiana State Medical Association at Lafayette, Sept. 24, 1914.

importance to her as anything in the whole range of knowledge.

Inasmuch as the early symptoms of cancer of the uterus have to do with vague and slight disturbances of the function of menstruation and with the occurrence of slight and irregular discharges, it is of the greatest importance that women should recognize the possible significance of these irregularities. An educated medical profession is essential to the eradication of cancer, and an educated and interested public is no less necessary.

What has so far been done toward the instruction of women in this subject? The methods which have been adopted for spreading general information among the people may be summarized in the appeal of the British Medical Association to midwives and nurses and in the message from the Cancer Committee of the Clinical Congress of Surgeons to the people of America.

The first reads: "Cancer may occur at any age and in a woman who looks quite well and who may have no pain, no wasting, no foul discharge and no profuse bleeding. To wait for pain, wasting, foul discharge and profuse bleeding is to throw away the chance of successful treatment. The early symptoms of cancer of the womb are bleeding which occurs after the change of life, bleeding after sexual intercourse, bleeding slight or abundant, even in young women, if occurring between the usual monthly periods, especially if accompanied by bad smelling or watery blood-tinged discharge, thin watery discharge occurring at any age." The message of the Cancer Committee of the Clinical Congress of Surgeons to the people of America is as follows: "Cancer is a very common malady. In the beginning, it is a strictly local process and not a blood disease. It is easily cured when removed early in its course. It is incurable in the later stages. It is no respecter of race, creed or social position. It is the common enemy of all mankind. Earnest thinking people in all walks of life must combine to make a determined fight against this relentless foe."

These messages convey the symptomatology of cancer in plain clear terms. These facts may be elaborated on in various ways in magazines, in lectures and addresses, with great advantage. However, it does seem that the plan adopted for teaching this subject to women could be improved by following a logical order, by giving instructions as we do to medical students, first, as to the normal condition, before we attempt to teach them the symptomatology of abnormal, or pathologic conditions. In other words, first teach the physiology of the functions of the uterus in order that the symptoms of disease may be the more readily and quickly grasped. I therefore insist, that inasmuch as the vast majority of women are uninformed as to normal menstruation, they should be first so instructed before they are taught the symptomatology of disease. In dwelling on the symptoms of cancer of the uterus alone without instruction as to the normal condition, in presenting this matter to the public, we are in a way presupposing a certain diagnostic responsibility which should not be expected of the public. In the early stages of cancer of the uterus there are no danger signals to draw attention to the malady. The early borderline cases are difficult to diagnose. No diagnostic responsibility should be put on the public. Women should be taught that their part in the solution of this problem is to be on their guard through the knowledge which we shall teach them and by the application of their powers of observation recognize early disturbances and seek competent medical advice.

There are other points in this problem which should be made clear to women that they may avoid the disasters resulting from mistaken ideas, prejudices, timidity, and false notions. Let them be informed that there are two methods of making a gynecologic diagnosis, the objective or physical examination of the patient, and the taking of the history. The history consists of the patient's observation in regard to irregularities of function and sensation. The physician confirms or corrects these observations by means of the objective or physical examination. This the patient must permit for otherwise she has lost the strongest method of diagnosis, that is, the direct examination of the diseased organs. The routine examination of any patient who consults a physician on account of gynecological symptoms would afford the surest means of recognizing cancer in time. Under all circumstances, however, the physician should insist on making an internal examination at once if there is the slightest irregularity in the least degree suspicious of cancer. The routine examination of all material removed from the womb by curettage is undoubtedly the ideal procedure and would certainly detect some cases of cancer sufficiently early to save their lives by radical operation which otherwise might escape notice until too late, because the signs of cancer of all organs, and especially of the womb, are superficial and the changes from the normal slight, both of function and sensation. Presumably the recognition by the patient of certain irregu-

lar symptoms, obscure and vague though they may be, has brought her to the physician for diagnosis and she should not place any obstacles in the way of the physician, who, realizing more than she, the intricacies of the problem of reaching a diagnosis at once, seeks to apply all the resources at his command to arrive at a definite conclusion.

The early cases often test the diagnostic skill and ability of the most experienced gynecologist. Often the microscope must be the last word in determining the diagnosis. The timidity and shrinking from examination while uterine bleeding is in progress must be overcome. The idea that irregular uterine bleeding is frequently natural and is due to a trivial cause such as over-exertion, etc., is false, and the belief that excessive bleeding or flooding is natural to the condition known as change of life is erroneous. The belief that cancer is incurable by operation is not based on facts and leads women to shun the knowledge of the existence of cancer in their bodies as long as possible.

Cancer is a malignant new growth of tissue of the body like skin or mucous membrane, which new growth exhibits two distinct characteristics — proliferation, extending outward, piling up from the surface affected, and an extension inward of the growth, infiltrating or penetrating the tissues with or without evidence of degeneration or ulceration. In the beginning cancer is as much a local disease as the sting of an insect or the bite of a reptile, and it does not become general except by delay in removal so that it has time to extend from its original site to become a general disease. The analogy of the bite of a poisonous reptile may be carried farther, for if the patient were as quickly apprised of the fact that she had a beginning cancer as she is conscious of the fact of being bitten by a snake and she should as quickly seek surgical assistance, provided those vital parts were not affected which are not amenable to treatment by surgery, no patient need die of cancer. Unfortunately, cancer gives no such warning and only very few vague and seemingly innocent disturbances are noted, a trifling change in a mole or wen, a slight thickening of the skin or mucous membrane, a small lump, a bit of discharge, a small sore slow to heal, none of which causes pain or discomfort.

No treatment of this subject is complete without reference to the proposal of "forward looking" medical men to apply the principles to cancer that have so richly rewarded the efforts of society in the fight against the rodents which carry bubonic plague, against the anopheles and stegomyia mosquitoes which convey malaria and yellow fever, against the house fly which carries typhoid, the body parasite which infects with typhus, and the tsetse fly whose bite causes sleeping sickness. By destruction of these threatening agents before the disease begins in the individual, thousands of lives have been saved. By advocating attention and removal of all possible known sources of cancerous growths, such as warts, moles, carious teeth, any kind of mechanical irritation about muco-cutaneous margins, repair of lacerations of the cervix uteri, pressure of corset stays on the breast, any source of prolonged mechanical irritation from occupation or habit; by thus anticipating the development, much prevention of cancer can undoubtedly be accomplished.

Now as to the duty of the physician: he must overcome the scruples and prejudices of his patient by tactful presentation of the case, that she may see the necessity of settling the diagnosis at once by direct examination and the danger of delay in investigating any irregularity, no matter how slight. It is a laudable feeling of human sympathy that leads the physician to desire to assuage his patient's fears and anxiety, but let him beware lest the patient suffer far greater in the end or lose her life through his well meant encouragement and his yielding to her pleadings for delay. It may happen that the woman, having nerved herself to consult the physician on account of suspicions aroused by her symptoms, eagerly seizes on the least word of the opinion in order to clear herself in her own mind of the suspicion of having cancer, and she may not return for a second consultation until too late; or if the first examination has been inconclusive, she may refuse another because she fears again to be placed in jeopardy of the diagnosis of cancer and again delays until too late; whereas if the first opinion had been exceedingly guarded, she would probably have submitted to further investigation and the removal of material for microscopical examination, which would immediately have affected an early diagnosis; a timely operation and a life saved.

Let physicians impress on their patients the importance of intelligent observation and if necessary, the recording of the facts regarding their menstrual histories. Every gynecologist meets with cases illustrative, first, of the value of early diagnosis and timely operation; patients are restored to health and cures are permanent: second, a group of cases illustra-

tive of the disaster of ill-advised delay through the erroneous ideas of the symptoms of cancer, waiting for cachexia, pain, and foul discharge; death inevitably results in this group: third, a group illustrative of the folly of refusing direct examination of diseased organs through timidity, modesty, or a fear of a diagnosis of cancer: fourth, a group illustrative of the great danger of delay on the part of the physician in pursuing the policy of watching and waiting in cases suspicious of cancer.

In conclusion, let us impress on physicians that until malignant disease can be positively excluded, no unnecessary delay should be permitted and no other diagnosis should be made. It must be recognized that it is far better to run the risk of an error in diagnosis than to put off an operation until all possibility of removing the cancerous growth has completely gone by. No unnecessary delay should occur in applying the microscopic test, and finally, let us at once and for all time abolish the fatal expectant attitude of waiting to observe whether or not the suspicious group of symptoms are producing changes or ulcerations in the cervix uteri. The nature of even the slightest changes in the appearance of the cervix uteri may be quickly determined by the application of the tests for the spirochete, the Wassermann reaction, the bacillus chancrosi, and the microscopic examination of the removed tissue for tuberculosis or neoplasms. It is fatal to the patient to wait for physical changes to take place. It is the physician's duty to the public to urge that such an attitude toward possible cancer of the uterus is absolutely unwarranted, unjustifiable and culpable in the light of modern scientific knowledge.

DISCUSSION

Dr. T. W. Kelsey, Attica: It strikes me that the education of the women on this proposition is primarily not so much the thing as it is to educate the general practitioner, or the general profession, to realize their responsibility in this matter. It is the general practitioner to whom these women all over this world go for advice in reference to these conditions, and it is he who should awaken to his responsibility in order to educate the women, and I think it is very fitting that this subject should come before the medical section rather than the surgical section.

The first should be to discover the cause. The doctor in his paper really admitted that we do not know the cause of cancer; that notwithstanding the fact that we have laboratory men and research men who are working and have been working for years, they still have not found the cause of cancer. We cannot look to them, nor to the surgeon who has already developed the surgical technic, so it looks as if we had no further advance along that line, consequently the early diagnosis is the only way we have that would be of practical utility at this time. And it is the general practitioner rather than the surgeon that should disseminate this knowledge to the people. There is scarcely a woman in the land but what has some general practitioner to whom she goes for advice, and there is his opportunity to get in touch with these women and tell them what they should know with reference to cancer.

The doctor spoke about making examinations —more examinations. I think a general practitioner that is over-worked, where his office hours are long, turns these cases away very often that come in complaining possibly of a little leukorrheal discharge, possibly some vaginal trouble, and he gives them something and gets rid of them without making an examination. The doctor insisted on more examinations, and I think that is right. Every physician should make more examinations—take nothing for granted.

There is another question which occurs here, and that is that while we do not know the direct cause of cancer, at the same time we do know from statistics that a great majority of cases of cancer of the uterus follow after some trauma to the uterus or the cervix during labor. In the Johns Hopkins Hospital 98 per cent. of women who have had cancer of the uterus have borne children. Dr. Howard Kelly says that in his private practice he has only seen three primipara that had cancer of the uterus, and one of these had a laceration of the cervix for some reason or other. Consequently it looks as if trauma is the exciting cause, if not the real cause of cancer of the uterus. What is there for the general practitioner to do with reference to these cases? You must look out for these traumas, lacerated cervixes, etc. I think every physician who waits on any woman in confinement should insist on following the confinement—say six or eight weeks later by an examination to see if he can ascertain the condition following the labor, so he will know whether or not there is a laceration. If a laceration is present I think it should be repaired in order to relieve her of that source of irritation.

I think we as physicians—not surgeons, or research men or laboratory men, but physicians, are losing a great opportunity if we do not, when these women come to us for advice, sit down and have a heart to heart talk and explain the significance of hemorrhage, of the passage of a little icteroid discharge coming on after the menstrual period—from 45 to 64,

telling them what that means and let them understand what they should be looking for. I think more good can be done in this way by the general practitioner talking to these women than in any other way.

Dr. Albert E. Sterne, Indianapolis: The chair will take the opportunity to say that it is a significant fact that the women who are afraid of cancer, who run to the doctor if they have a lump or a spot anywhere, practically never develop cancer, and the reason is very plain. The doctor has found out from repeated examinations whether or not any change has occurred, and they have come to early operation — have been operated on suspicion. Cancers of the uterus, and cancers of the breast are cured before they are cancers, that is, before we can say they are cancers clinically—the cases which recover are those which we operate on suspicion more than certainty. After certainty is established the question of the outcome in any operation is a debatable one.

Now we have at the present time a distinct aid in the treatment of cancer, and it comes from the laboratory—not the old way, but through the blood. In the Abderhalden test there is a ferment thrown into the blood of cancerous patients—just as in the condition of pregnancy the parenteral matter is thrown into the blood—which produces a ferment of the serum capable of digesting the cancerous product, and particularly in cancer of the uterus the blood serum early shows the presence of this ferment, as Abderhalden calls it—these ferments appearing in the blood of cancerous patients before clinical signs of cancer are evident. So we have in our hands, as near as we can judge, an accurate diagnostic method, which must be carried out with the utmost nicety. It is quite as simple as the Wassermann test, but it is more open to error than the Wassermann, and must be done with certainty and precision. The Abderhalden is commonly supposed to be only available in pregnancy, but that is an error. It has opened a great field of scientific research and has given a marked stimulus to the study of cancer, so that possibly along these lines we may find a distinct aid to what we have already in our possession.

Dr. Bernays Kennedy (closing): I want to say that while we do not know just how important the Abderhalden test will prove to be in cancer, I do not know of a case where it was misleading in a diagnosis of pregnancy. But let us not put any obstacle in the way of direct examination of the organs of women that are threatened in the slightest degree with cancer. That is all I fear from the Abderhalden test. I do not believe the serum test for cancer should take the place or should stand in the way of the direct examination of the suspected organs.

NASAL POLYPI *

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Nasal polypi are small tumors or rather bulgings of the mucous membrane in the nose or sinuses. They are sometimes called fibromyxomata or myxomata. They are of a gelatinous nature, and are made up of connective tissue, mucus, leukocytes, and often contain blood. Their formation is dependent upon their location and the condition of the tissue that caused them.

Myxomata are never found on the floor or roof of the nose, and rarely on the septum or lower turbinate body. They most commonly are found around the openings leading from the nose to the sinuses. The nasal location is the middle turbinate body, the ethmoid cells, and the uncinate process. It is not uncommon to find them in the antrum, the anterior and posterior ethmoids, and the frontal and sphenoid sinuses.

Rhinologists are not all agreed as to the etiology, but they all agree that a polypus is a degeneration of the mucosa at the point of location. The vitality of the tissue is so lowered that the new formation takes the place of an edema. I can see how polypi could be caused by a narrowed lumen of the nares, or from neglected catarrhal conditions; but such cases would be rare. Trauma might be followed with edema of long standing, which could end in polypi, but this too would be rare. The etiology is almost universally due to a chronic pathological condition, involving the mucous membrane, and often the periosteum and bone. It is a disease of adult life and not childhood. It is rare in childhood and quite frequent in adults. Very much more frequent than is supposed by patients and even many physicians. Zuckerkandl's reports of the post-mortem room are one out of every eight or nine bodies examined. Morell Mackenzie's throat clinic reports give one out of every twenty patients.

Ballenger and others believe the etiology is due to sinusitis. Lack says, "It is a localized edematous inflammation of the nasal mucous membrane, the result of osteitis of the underlying bone." This is true in many cases, but yet it does not give the original cause. Some physicians consider polypi of such little importance that they remove them without ascertaining their etiology. I have always considered the condition of much graver importance. It has been

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my experience that polypi can generally be traced to sinusitis. The sinusitis, no doubt, was due to an infection from the nose; and the nasal infection was the result of some obstruction to nasal drainage.

The pent up discharges in a sinus become so acrid that the epithelium of the mucosa becomes eroded at the ostium. The tissue thus becomes edematous and not infrequently involves the periosteum and bone. At this point polypi spring up, but in reality they are a pendulous part of the mucosa, and can hardly be called neoplasms, because if the sinusitis is cured the polypi disappear spontaneously.

It should not be difficult to make a differential diagnosis of nasal polypi, if one remembers the color, touch and location. A papilloma, fibroma, adenoma or lymphoma might be taken for a polypus, if one did not remember the color, touch and location. These neoplasms are pinkish in color and have a decided firmness on touch with a probe, while polypi have a grayish color and when touched are soft and easily moved. The above neoplasms are usually situated singly on the floor of the nose, or in the vicinity of the lower turbinate body. Polypi are almost universally multiple and very rarely on the floor of the nose or in the vicinity of the lower turbinate body. Enlarged turbinate bodies are sometimes taken for polypi and removed. The red color and firmness of the turbinate body should make it easy to differentiate.

The after effects of myxomata vary in different people. I have seen cases of fifteen years' standing, with no apparent injury. On the other hand, many cases suffer with divers symptoms, such as asthma, emphysema, dizziness, headache, pain in the eyes, anemia, cough, bronchitis, pharyngitis, lowered vitality, weakened mental state, insomnia, etc. The effect upon the general system depends largely upon nasal obstruction and infection. Those patients who have always had ample space for nasal respiration and have never breathed through the mouth have but few after effects. On the other hand, those with nasal occlusion have suffered with the constitutional symptoms due to lack of oxygenated blood and infection. The morning headache in these cases is due to the damming up of the secretions in the sinuses and the improper oxygenating of the blood.

Before removing polypi the nose should be thoroughly irrigated with some good sterile cleansing solution. Borate of soda is very efficient to wash away all the crusts and discharges, and yet more agreeable to the mucosa than plain water. The field of operation should be well anesthetized with a good local anesthetic. A 4 per cent. solution of cocain or a solution of novocain combined with adnephrin is very satisfactory. Among the many methods for the removal of polypi, the snare is almost universally used. The method of pulling them out with forceps may do much injury by tearing off shreds of mucous membrane that need not be sacrificed.

The bare removal of polypi is a simple procedure; but the rhinologist's duty should not stop here; he should ascertain the etiology and correct the same. If due to obstruction to proper breathing, the impediments should be removed. If due to sinusitis, drainage should be given the sinuses and all necrosed bones removed.

If these cases receive the proper attention, the prognosis is generally good; but if the polypi only are removed, others will appear. I have seen patients from whom nasal polypi had been removed from two to four times each year for twelve years, and yet their reappearance could not be stopped until the sinuses were thoroughly drained. It is an injustice to a patient to remove his polypi without ascertaining the etiology and advising the necessary surgery for permanent relief. The patient should be taught that a polypus is only a symptom of some pathological condition that must be corrected before the whole chain of constitutional symptoms will disappear. The patient has a right to know his prognosis, and the rhinologist should, generally, be able to report it favorably.

There can be no acute form or stage of nasal polypi, because they are the results of a chronic morbid state of the mucous membrane. Their formation is dependent upon chronicity.

In considering treatment there are two conditions, mouth breathing and infection, that must be overcome before the patient will regain his health. As has been previously stated in this paper, the first can only be accomplished by the complete removal of the polypi, the proper drainage of the sinuses, the removal of all necrotic bones, and the removal of all obstructions to proper nasal breathing. As it is often difficult to tell how much of the turbinate bodies to remove, the operator should gage the nasal ventilation or he may overoperate and leave too much nasal space. If so unfortunate the patient will always have, because of the lack of warmth and moisture in the inhaled air, the dry pharynx and many of the constitutional symptoms that he had during mouth breathing.

Laboratory examinations of both the blood and nasal discharges have shown that these cases are suffering with infection. Practically all

polypoid patients are anemic, and many have had anemia from childhood. A large percentage of the polypoid patients have been mouth breathers from childhood. In fact our myxedematous and sinus cases were adenoid and tonsil cases during childhood. From childhood the pathological conditions follow each other in the following order: adenoids and tonsils, mouth breathing, misplacement of the facial bones or deformity, "chronic catarrh," nasal obstructions, sinusitis and polypi.

The removal of the adenoids and tonsils and the establishment of normal respiration will correct the anemia in the child, but it is not true in cases of myxedema. Even with good drainage to the sinuses and free nasal respiration the anemia and low vitality to the system continues. The ordinary iron tonics that are so beneficial to children after operations is of little benefit to polypoid cases. It is generally known that the anemia of the child is more easily corrected than the anemia of the adult. To say the child absorbs iron more easily than the adult does not explain the difference. The long-continued source of infection, as in polypi, seems to so impoverish the blood stream that other and more stringent methods are necessary.

Locally, the ideal treatment is the one that keeps the nares clean all the time. Instead of the antiseptic sprays, as they are called, I now generally use the irrigator. As a routine I prescribe borate of soda, dram 2; chlorate of soda, dram ½, to a quart of warm water. This to be one irrigation and repeated from three to five times in twenty-four hours. This solution is more pleasant and agreeable to the patient than plain water. The idea is to irrigate often so that all crusts and discharges are washed away frequently and thus give Nature an opportunity to repair. As to a solution being antiseptic, any antiseptic that will kill bacteria will also destroy tissue. My idea is not to kill but wash away the bacteria. The patient can use the ordinary fountain syringe as an irrigator; but in place of the hard rubber nozzle I prescribe a soft rubber catheter. A No. 9 catheter with six small holes around the end will make an efficient spray that can be passed up the nostrils without any pain or discomfort to the patient. An irrigation given in this way will not injure the eustachian tubes as is often done by the ordinary douche. Thorough and frequent cleansing of the nares and sinuses will stop the source of infection and give the general system an opportunity of regaining the normal standard.

I have tried the autogenous and stock vaccines in connection with the necessary surgery and local treatment; but my results have not been very satisfactory. Urotropin and divers tonic treatments have been of service in many cases.

There is a class of cases that do not seem to improve on any of the accepted and tried treatments. Even with hospital rest, diet and fresh air they merely hold their own. They complain of rheumatism, neuritis or neuralgia. In fact, their aches and pains are a constant source of irritation to themselves and their attendants. Many cases of chronic anemia have been relieved with large doses of arsenic. This has been taught us by the internist. Why should not these septic cases obtain relief in the same way? I have had a short experience of only ten cases and my results have been more than satisfactory. I believe we have in arsenic a remedy that will yield results in these obstinate cases; but it must be given in very large doses intravenously or hypodermically. I speak reservedly of this, because of my little experience; but I hope some time in the future to give a series of cases that will verify my opinion.

DISCUSSION

Dr. W. S. Tomlin, Indianapolis: There seems to be very little discussion now on the etiology of polypi. Occasionally there is a question as to the sequence of events in an individual case. That there is usually a lack of drainage and ventilation in the nasal cavity proper, I think is pretty well conceded. However, this has not usually been the direct cause of the polypi. The lack of ventilation and drainage has been the cause of a sinusitis, which has resulted in the polypi. The changes that take place in the region of the polypus or at the place of its attachment, and are found at the time of operation, have not been the cause of the polypus, but are the result of it. The periostitis and the osteitis immediately underlying the polypus have been the result of it. We find the same thing in polypi in the ear, where degeneration of bone has led to communication with the brain cavity. The polypus has been to a considerable extent the cause of that osteitis.

As the doctor has so well brought out, nothing of value has been done in these cases until you have secured proper ventilation and drainage of the nose in which the polypus has grown. If there is a sinusitis — and very frequently there is—that must be cleared up, and you may not expect to have done very much for your patient in the way of any lasting benefit until you have taken care of these other conditions from which it has depended.

My idea differs a little from that of the essayist upon the value of irrigations. I am free to say that irrigations have very little part,

in my judgment, in the treatment of nasal conditions. It has seemed to me that they have a tendency to produce a reduction of vitality in washing away the debris, especially as is done frequently. It has a tendency to wash away Nature's serum that is there for the purpose of healing the tissues. The polypi that are attached to the middle turbinated bone, or the other structures which we can and should preserve, should be treated very carefully. I am in the habit not of taking off any considerable portion of the tissues to which they are attached, unless it looks to be very much aggravated, because at a subsequent treatment, after a proper snaring, the actual cautery or chromic acid, in small amount, will generally suffice to cause a restoration of physiological processes.

The use of vaccines in these cases sometimes has value, as the essayist has said, in combating the processes which cause the polypi. My experience with vaccines has been to some extent satisfactory. Dr. Stevenson presented a very excellent paper on the subject a year or so ago, but I have continued to find, in a large measure, that the value of vaccines is in direct proportion to the thoroughness with which I have previously operated.

Dr. J. D. Heitger, Bedford: One thing appeals to me, which will bear a great deal in the future on the etiology of these conditions. Recently a paper was read by Dr. Hubbard of Toledo on the humidity of the air which we breathe, and in that paper he brought out a few very important conditions for the sanitary engineers and plumbers to fulfil. If I can recall the figures, I think he spoke of ordinary air in the winter as having a humidity of 80 per cent. Just what his standard was he did not say, and I do not know. It must be a standard used by engineers. But with a temperature of say 65 F. and a humidity of 80 per cent., that was supposed to be the ideal condition for air which the normal human nose can adequately take care of. With our ordinary heating systems there has been a tendency during the last fifteen or twenty years to raise that temperature about 10 degrees, and with the raising of that temperature up to 75 F. the best efficiency of humidity with any of the heating plants is about 50 per cent. For instance, in winter we step out of that room into the outside air of say, in this community, between 20 and 30 degrees, with a humidity very much elevated, and vice versa. That continued series of traumatic shocks to the mucous membrane has a very damaging effect, and particularly will it have such effect on a nose which has any obstruction to proper nasal breathing. I think it was Dr. Richardson of Washington who stated that he had made a study of this matter, particularly in relation to some old furniture which he had. It was quite a habit of his to collect old furniture, which was more or less glued, and he noticed that in the winter those chairs would creak, and in the summer there would be no noise from them. He tried to regulate the temperature in his office so that he would have it 10 degrees lower—about 65 F., with a humidity of nearly 70 per cent.—between 70 F. and 80 per cent. Upon being asked if his patients did not complain, he said yes. He said that many patients who had a beginning change around the middle meatus and in the locality where we find the polypi—where there was a beginning polypoid change—would sit down, and in a little while their noses would become stopped up a little, get snuffy, eyes watery; and one of the earlier evidences of this polypoid change can be brought out in patients who, when they sit down in an atmosphere that is a little bit chilly, according to our methods of heating at the present time, have symptoms of stuffiness in the nose. The hands will get cold, with a gradual lowering of oxidation and metabolism of the body, due to the swelling of the tissues and the cutting down of the oxygenation of the blood.

I think in that discussion Dr. Barnhill said he had been subject to those symptoms and upon examination by a rhinologist he found that he had a beginning polypoid condition in his nose. When he had this remedied, the symptoms disappeared. In the future we must look to the education of the public toward getting an atmosphere which will have less bad effect upon the nasal passages, just as the oculist must look to the lighting system to prevent damage to the eyes.

Dr. D. W. Stevenson, Richmond: I want to explain the 80 per cent. mentioned by Dr. Heitger. That means the relative humidity, and 100 per cent. represents all that the air can hold as liquid. Therefore, the pulling power possible, in the case of the condition being 80 per cent., would really be twenty. Take, for instance, the condition we often find in schools, of 30 or 20 degrees, which is as dry as the dryest desert, subtract 20 from 100 and that leaves 80 per cent. of pulling power. There is no doubt that in America we all have our rooms too warm. The average American wants the temperature to be up to 70° or 75°. The Europeans do far better, I believe. The day is coming when our schoolrooms will be heated only to 65 F., and better, even, if lower, although there will probably be great complaint from the parents when that day comes. The humidity in our rooms ought to be increased.

The system of air-washers in some of our public schools now is very good, and we ought to add our influence to see that in all our schools we have air-washing. The air ought to be washed, then the humidity is increased.

I would agree with Dr. Tomlin that irrigation is rather disagreeable to most patients, and it is very doubtful if it is the ideal method of treatment. I think in the acute stage possibly some mercury ointment that really will be absorbed in a day or so will do more good than the use of irrigations. The child may easily apply that for two or three days. Then you can easily change off, if afraid of the effect of the mercury, to some boric acid ointment, put up in a little tube. With this treatment you will get nicer results than if you depend on irrigations, except in very acute cases. Irrigations always contain a certain amount of danger, are disagreeable, and the patients do not love you, as a rule.

I think the point brought out by Dr. Heitger is a good one, that we ought to pay a large amount of attention to humidity, and I would say in addition that I have found, even in my own case, the use of vaccines of great help. I believe the day is coming when vaccine treatment will be combined in almost every case with some healing ointment, and with the general directions as to the hygiene of living. We should train our patients to live in drafts. I hope the day will come when our schools will have fans going all the year around; when children will be taught to live in a draft striking the face, keeping the heart going better, with better blood tension. In consumption, the chief use of the fresh air treatment is higher blood tension, and better circulation of the blood in the brain. A child will study better if he has the tonic effect of a draft striking the face all the time. A child in an atmosphere where the humidity is low is going to be stupid, will not progress in school, and so I hope the day will come when fans will be used the whole year in our schools.

Dr. Spohn (closing discussion): The treatment of nasal troubles in children did not come under consideration in my paper, and for reasons given. As the subject was brought up in the discussion I desire to say that I never use irrigations in children. I do not believe any one can successfully use ointments, sprays, or irrigations in children. If a child needs nasal treatment I prescribe a powder triturate (aristol, subnitrate of bismuth and powd. acacia, flavored with oil of rose or oil of peppermint); this to be used with a powder blower.

Evidently I was not understood in my statement concerning irrigations. I do not prescribe irrigations in all nasal troubles. I prescribe them in polypoid or sinus cases. All physicians agree that the nose should be kept clean and clear of all discharges. The method that will meet the requirements and produce the least discomfort to the patient should be used. Medicines in the nares are of benefit only as they give comfort to the patients. Nature does the healing, so to speak, and not the medicines. As I stated in my paper, any medicines that will destroy bacteria will also destroy the tissue. The irrigations with borax are very agreeable to the patient, very much more agreeable than plain water. The solutions always should be the temperature of the body.

The reference to humidity and lowered temperatures of the atmosphere are generally true; yet the class of cases under consideration have nasal trouble when the atmosphere has a humidity of 80 and a temperature of 65. Dry, light and oxygenated air gives the patient the most comfort. This is illustrated in those cases that visit New Mexico, Colorado or similar regions with a light atmosphere and an elevation. The air has such a drying and evaporating power that the nasal passages soon become dry and clear of all secretions. Under such conditions Nature repairs rapidly, and the general system also soon regains itself because the source of infection has been stopped.

TRACHOMA IN INDIANA*

Eldridge M. Shanklin, M.D.
HAMMOND

In my discussion of this subject it is not my purpose to go into the history, etiology, symptomatology and treatment of trachoma; rather do I desire to present some of its economic and sociologic phases and in some measure arouse the profession to a realization of the danger of its present attitude toward this disease. I have frequently been amazed at the complacent view with which the average general practitioner regards trachoma, and as will be seen later, the general practitioner is much to blame for the light manner in which the public regards the infection. Even a brief review of the recent literature will enable one to gain a somewhat accurate conception of what dire results are being wrought in many districts by trachoma, and to the oculist living among a population having a large percentage of immigrants from southern Europe the question assumes vast

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proportions. Through the grand work of Dr. J. W. Stucky and of the United States Public Health Service, the trachoma situation in many places, particularly in Kentucky and among the American Indians, has been forcibly brought to our attention, and he who makes a study of these reports can but conclude that there is indeed an element of danger in trachoma.

While trachoma is essentially a filth disease and has been called the "poor man's disease," yet we so frequently see it among other classes as to cause us to feel that its spread is a menace to all in many instances. Certain races, particularly the American Indian, are most frequently affected. J. W. Schereschewsky of the United States Public Health Service makes a startling report on trachoma among these people. In Oklahoma, of 3,852 examined, 2,235, or 68.72 per cent., had trachoma. In Wyoming, 51 per cent. are affected. In the boarding schools nearly 30 per cent. and in one Oklahoma school 92.10 per cent. had trachoma!

Should one casually inquire as to the prevalence of trachoma in Indiana, the average physician would state that it was quite rare. So prevalent is this idea that the report of J. W. Nydegger of the United States Public Health Service on "A Sanitary Survey of Schools in Bartholomew County, Indiana," has aroused much interest. Forty-eight well-marked cases were found among the 3,969 pupils in twenty schools, or 1.2 per cent. Twenty cases were found in the country schools and twenty-eight in the cities. Follicular conjunctivitis was found in twenty children, principally those in the country districts. When we consider that trachoma is more prevalent among adults than children, we may readily conclude that this country has a rather large number of cases. Lake County has a large number of trachoma victims, our large foreign population probably accounting for their presence. Many cases are found among the native population, however, one instance in particular being of much interest. I am indebted to Dr. J. W. Iddings of Lowell for this history. About seventy-five years ago a man located on a farm in the southern part of our county and proceeded to raise crops and a family. That he was successful in the latter pursuit is evidenced by the fourteen children which he fathered. Now this man acquired trachoma; his children all acquired trachoma; many of the grandchildren acquired trachoma; with the result that from the one primary source we have 38 cases. There were 3 cases of total blindness, 4 cases of blindness in one eye and 10 cases in which the vision was seriously impaired. Yet, even in the face of such histories, we frequently hear physicians declare that trachoma is in no sense a menace to vision!

Practically all writers agree as to the essential features of trachoma—its habitat, spread and its element of danger. The writer finds but one essayist who chooses to disagree on important points, and his opinion is of such wide divergence as to be left unconsidered in the present discussion. In speaking of the distribution of these cases, Franklin (*Pennsylvania Med. Jour.*, Feb., 1909) says: "Trachoma is found largely, almost entirely, among the hospital dispensary class of patients in our large cities and in our cities with a considerable percentage of foreign-born population." Furthermore, he is of the opinion that trachoma is frequently unrecognized in our medical clinics, stating, "It is passed over, even where its patent symptoms call for interference. We have now in this country enough trachoma to work woe to our land without the introduction of fresh cases from without." Posey, in his discussion of the admirable paper, declares all is not being done that should be done to treat and eradicate the disease. He refers to the handling of these cases in the London schools, where the infected children are sent to one of the isolation hospitals in the suburbs. He further states that 7 per cent. of the blind in the Pennsylvania institutions are there because of trachoma. In that state trachoma is classed as contagious and is reportable as such.

Steiren (*Pennsylvania Med. Jour.*, Feb., 1909) states that a certain percentage of Hungarians, returned from America after an absence of a year or more, visit the Budapest eye clinics seeking relief from trachoma. There can be no doubt as to the source of infection in these cases, and it shows conclusively the spread of the infection in America. This author cites an instance in which there were sixty-seven immigrants in the same compartment of a ship suffering from an inflammatory affliction of the eyes, in all probability due to the fact of the presence in their midst of four cases of trachoma in a state of acute exacerbation.

Notwithstanding the precautions taken by steamship authorities to prevent the embarkation of these persons, in the year ending June

30, 1911, there were 1,167 cases detected at Ellis Island. In the following year there were 718 cases. In six years (1907-1912) there were 6,657 cases. Surely it requires no vivid imagination to realize what havoc these cases might have wrought had they been permitted to spread over the country.

McMullen (*Jour. Am. Med. Assn.*, Sept., 1913) aptly says: "It is a fact that trachoma is more easily preventable than curable, and is a splendid example of the old adage, 'An ounce of prevention is worth a pound of cure.' Our immigration law is the only guard we have against a disease that causes blindness in 75 per cent. of untreated cases." Von Shally, New York State Board of Health, after a time spent in eastern Kentucky with Dr. Stucky, said, "The situation in this country at present is ludicrous; we take precautions to keep out infected aliens, but cherish, at least do very little to discourage, the spread of trachoma in our midst, and most of all among our oldest 'American stock' at that." I recently requested about ninety physicians, devoting all or a part of their time to eye work, to answer a series of questions relating to trachoma. I received replies from about seventy of this number. The questions were as follows:

1. Has your city any considerable foreign population?
2. Is trachoma prevalent in your city?
3. How many cases do you see yearly?
4. Are these cases among the native or foreign population?
5. Do you report these cases to the board of public health?
6. What restrictions, if any, should be placed upon trachoma cases?

REMARKS

The first question was to bring out the relation of trachoma cases to foreign population. Except in the great manufacturing districts in the northern part of the state and in Indianapolis, this factor does not enter into the question to any appreciable extent. In the southern part of Indiana we find a great number of trachoma cases, practically all among the natives. Question 2 brought a variety of replies, some paradoxical. As an example, four men reply from the same city, and one of our smaller cities at that; three of them say trachoma is not at all prevalent, and yet the four report more than 200 cases seen yearly!

The total number of cases reported is about 1,400, with the larger percentage in the southern district. Over 60 per cent. of the cases are reported as occurring among natives and less than 20 per cent. among foreigners, the remaining 20 per cent. reported as occurring in both.

In the matter of reporting trachoma to the boards of health, just six men of the list of seventy are reporting their cases; three of them having begun to do so in the past few months. I was not aware that these cases were reportable until a short time ago. A letter of inquiry to Dr. J. N. Hurty, secretary of the Indiana State Board of Health, brought the reply that trachoma had been placed on the list of reportable diseases and that cases not under active treatment should be quarantined.

In answer to Question 6, relative to the regulation of trachoma, practically all were agreed that something was necessary, though one or two, misguided souls, judging from their remarks, were of the opinion that "we should worry" when it comes to trachoma. The idea of a printed circular concerning trachoma and its dangers to be issued by the State Board of Health and handed to all trachoma patients is suggested by many. Isolation, though conceded to be impracticable, is suggested by a large percentage. Keep trachoma cases out of schools, s the very good suggestion of a large number. Personally, I believe that the sooner we all report our cases the sooner will the question of what to do with trachoma be answered by the State Board of Health.

If all cases are reported, and from 1,200 to 1,500 are recorded yearly, how long do you suppose our good friend Hurty will stand for it? As to the number of cases in the state, no one can answer; the 1,400 cases reported to me as seen yearly are but a small percentage of the real number we have. In my county I believe we have, when industrial conditions are normal, about 300 cases. Basing my figures on the reports received from over the state, various statements from health officers and from other sources, I believe that 5,000 is a very small estimate of the number of trachoma cases in Indiana.

Now what about the economic phase of trachoma? First, as to the cost to county and state, it is estimated that it costs the state $3,000 to educate a blind child (Illinois estimate). Geo. A. Wilson, superintendent Indiana School for the Blind, reports four cases of blindness due to trachoma in his institution. He says, "applications for admittance are filled out by the parents and are not absolutely reliable."

Even four cases, at an approximate expense of $12,000, represents too much money paid out for a preventable condition.

The greatest cost is not to the state, however, but to the county and the individual. Trachoma victims are rapidly appearing in the reports of many of our county asylums for the poor and needlessly too. In many cases intelligent, thorough and persistent treatment will get these cases out of the poorhouse. One case may be cited as showing what may be done in this way: Milan came to America several years ago. We believe he contracted trachoma in a Gary boarding house. After about two years of haphazard treatment he was practically blind and was sent to the poor-farm. Here, after a time, his left eye was enucleated, probably on account of pannus. The right eye continuing to fail, the superintendent asked the commissioners for permission to consult an oculist, which was granted. The case was operated and after several months' treatment the man was discharged practically cured, and has since earned his living. His age being about 30, it is easy to estimate the cost of providing for him the balance of his days had he not been cured. Many similar cases are no doubt to be found in our poor asylums throughout the state.

Under a recent ruling by one of our large steel corporations no person with trachoma is given employment and old employees found thus afflicted are dismissed until such a time as they are cured. I have recently had several cases of injury to one or both eyes in which it was a pretty problem to estimate just how much damage was done by the injury and how much was due to trachoma. In two of these cases, had the corporation made a practice of thorough examination of all applicants for work, enough would have been saved to provide for such examination for several years.

Publicity is our greatest asset in fighting trachoma. We must assure the laity and some physicians as well that trachoma is a dangerous contagious disease, and that it is communicated chiefly through the use of a common towel, handkerchief, etc. Physicians should be urged to cease using the term "granulated eyelids" for any and all lid affections, as this is a most pernicious habit. Such a diagnosis given in a case that clears up in a few days naturally impresses the patient that granulated lids is an affection of little consequence. I frequently find it no little task to convince a trachoma patient that he has a serious disease, once he is told he has granulated lids. Thus it may be seen that there is need of a campaign of education among our own profession.

In conclusion, I would make the following suggestions:

1. We must give more publicity to trachoma and its dangers.

2. Our cases should immediately be reported, that the health authorities may be apprised of the real trachoma situation.

3. Our committees on conservation of vision should urge those making public addresses on conservation to go thoroughly into this subject.

4. Finally, let us get away from the habit of using the term "granulated lids," as applied to any and all lid affections.

DISCUSSION

Dr. Albert E. Bulson, Jr., Fort Wayne: I think Dr. Shanklin's paper should teach us to recognize the importance of bringing before the health authorities the fact that trachoma is an exceedingly common disease, even in Indiana. I know that we have considerable trachoma around Fort Wayne. I have been treating trachoma off and on for a great many years. The first case I ever had anything to do with (over twenty years ago) came through our Syrian colony. For quite a time we had fresh cases of trachoma cropping up through the Syrians. Then we had a new crop of cases that came from the Illinois farmers who began selling their rich farms in southern Illinois and buying farms in northern Indiana where they could get land so much cheaper than in Illinois. They came from the region in Illinois where trachoma has been fought so strenuously by the Illinois State Board of Health. These farmers not only had trachoma, but, as has been pointed out by Dr. Shanklin, their wives and children had it, and many of them had the disease in a most obstinate form.

I don't know what we are going to do with these cases, and to my notion about the only thing that can be done is to put them under supervision and teach them how not only to take care of themselves but to prevent the spread of the disease among others. You cannot quarantine them. They won't stand for it and I don't blame them. It would be an enormous expense to do that. But much can be accomplished through the medium of education. The majority of these people do not realize the necessity of having their own towels, or, better still, the sanitary paper towels now put on the market. That is what I recommend to all of

my trachoma patients—an avoidance of the use of anything which may be contaminated and thus spread the contagion to others. That, it seems to me, is the most important feature of the whole question.

So far as the children are concerned, I think they should be segregated. I do not believe they should be permitted to come in contact with the pupils in the public schools any more than is absolutely necessary in order to see that they are educated. These children should be taught by their physician and the health officers to take care of themselves to prevent the spread of the disease.

One other thing: what are we going to do with these cases that become practically blind? I believe as Dr. Shanklin says, much can be accomplished by appropriate operative measures. Some of them have been given up as practically hopeless, with pannus, entropion, and all the other symptoms with which we are familiar, and later have decidedly improved by operative measures. By that I mean radical operation for the restoration of the lids and operative treatment of the trachomatous process.

After trying a great many remedies for the treatment of the disease I am firmly convinced that there is absolutely nothing that will take the place of the old copper sulphate treatment, supplemented by the occasional use of silver nitrate. But I believe that practically every one of the old cases must of necessity have an operation to correct deformities, or you are wasting your time. In cases known as conjunctivitis sicca, or the atrophic form, but little, if anything, is to be accomplished.

I think Dr. Shanklin is to be commended for having brought to our attention the importance of this whole subject, and particularly the prevalence of the disease in a state which is supposed to be reasonably free from it.

Dr. L. D. Brose, Evansville: I am glad Dr. Shanklin has brought up this subject, first, because it hinges on the conservation of vision movement, in which I have been interested the last year. Second, I see a great many cases of trachoma and have for over twenty years. The southern part of Indiana, portions of Kentucky, the Ohio Valley and southern Illinois are full of it. In Kentucky and Indiana I find the disease among the native Americans, but in southern Illinois I find it in the foreigners — coal miners. I see the most terrible ravages of this disease in ulceration of the cornea and often perforation. One of the saddest cases of which I know occurred in a young girl who came to me. I told her it would take anywhere from six months to four years of treatment. She did not remain under my care. Six years later she came to me sightless, with both eyes enucleated, and wanting artificial eyes. I gave them to her, and she told me she wanted them because she was to be married soon after. She was a telephone operator, and I was told that she was one of the best exchange operators they ever had.

Trachoma is a terrible disease, and I do not know how we are going to control it. The trouble is this: We treat these patients and they get better. Then they stop treatments and come back after a while in a worse condition than at first. Then, among children, these conditions are neglected. For instance, I have a little patient, a girl, who ought to be in school. She has a pannus in both eyes, ulcerated corneas, and I do not know how she can ever do any schoolwork at all. So the problem is a very serious one.

Professor Hirschberg in his description of the disease said that it was a disease of the lowlands, but since Dr. Stucky has reported his experience in the mountainous region of Kentucky I have changed my opinion. But when you treat these cases it is remarkable what benefit you can give them if they stay under your care. I have had many of them give my treatment to their friends, who have made no progress whatever, but got worse. One case I remember especially of a young man who was going out to Idaho. He had an acute exacerbation, and I think he stayed with me about a week or ten days. After going to Idaho he improved and in a year was well.

Many of the cases I have had have had a peculiar odor and I have been unable to do anything at all with them.

Dr. W. F. Hughes, Indianapolis: One thing that has interested me is the fact that in the past four or five years there has been a great decrease in the numbers affected with this disease who present themselves at the clinics. Ten years ago I think that three-quarters of the trachoma cases were in people of foreign descent. At the present time that percentage has changed. I think fully one-half of the patients who apply in the clinics for treatment now are American-born citizens. Whether these people come from the districts in Kentucky which supply a great many of our citizens in Indiana, or not, I do not know, but it certainly is a fact that the percentage of American-born individuals in Indianapolis who have trachoma has increased lately.

In regard to the treatment of trachoma, it has been an interesting thing to watch certain families that attend the clinic regularly. Dr. Hood and Dr. Heath will remember one family in which the grandmother is totally blind; the

daughter has good light perception and that is practically all; the grandaughter has a stage of trachoma that is advancing very rapidly. Those patients are very careless about their treatment. I have never yet seen a patient lose his or her eyesight entirely if careful about treatment.

I think as Dr. Bulson said, that copper sulphate is a valuable thing. However, I place my reliance chiefly on silver nitrate. It has the objection, of course, of producing a faint stain, but that is a small point when compared with retained vision. I am perfectly satisfied that constant treatment — it makes no difference what you use — under sanitary conditions will make it possible for vision to be retained in a very, very large proportion of the cases. The remedial steps to take, of course, naturally come up in a discussion of this subject.

I really think it is out of the question to think of quarantine, but education has appealed to me as the most important thing. In nine-tenths of the patients with trachoma, if you give them the proper instructions so far as sanitation and hygienic living are concerned, you will to a reasonable extent usually prevent the disease from spreading to other members of the family.

DR. SHANKLIN (closing the discussion): In connection with the cases reported from southern Illinois, spoken of by Dr. Bulson, Dr. Hadley of Frankfort wrote me in answer to my form letter, saying that he sees on an average twenty-five cases yearly, mostly in the springtime; that all these cases come from what we call the black soil district. He said the farmers go out there and work in just a certain circumscribed region. They have typical trachoma—every one of them. In the fall time he hardly sees the disease at all. This may have something to do with the causation of trachoma in southern Illinois.

One thing about the treatment: If a man goes into the treatment of trachoma and undertakes to cover the changes the treatment has undergone in the last few years, he has something on his hands. The main thing and the important thing is this, as I see it: Cases under active treatment are in very little danger of transferring infection. So long as you keep the case under treatment, you will not have much danger of spreading the infection.

So far as copper sulphate is concerned, I suppose it is pretty good. I think I have something better, but have not the time to go into the treatment just now.

Dr. Brose spoke of the difference in the results obtained when patients are treated by themselves, or take the medicine and use it themselves or have the family physician use it. He uses the John E. Weeks' method of 1 to 500 bichlorid of mercury solution applied under cocain, twice a day or week, depending on the severity of the case. No matter who the family physician is, you can tell him how to do that and draw diagrams and make little probes and send them to him and send him your solution, and he will not do it right, because he is not used to handling those cases. If you are going to treat trachoma you have to go at it in hammer-and-tongs style. You can't handle it easily if you are going to get results. You have to treat it until the infection is killed or covered up so that it will not get out. That is all there is to it.

A TECHNIC OF THE ROENTGEN RAY MASSIVE DOSE FOR TREATMENT OF DEEP SEATED CARCINOMA

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The rays emanating from an x-ray tube range from hard to soft, terms which perhaps for the purposes of this paper need some explanation. The hard rays may also be called the long rays, having reference to their range. They are the rays having the greatest penetrating power; they are the most far reaching.

The soft rays might inversely be called the short rays, having a short range and low power of penetration. The hard ray has the effect, by its greater penetrating power, of passing the skin intact, or practically so, having a minimum effect upon the skin, while the low power or soft ray is more or less broken up or shattered by its impact on the skin or any other surface and it is believed that the physiological effect of the soft ray on the skin is greatly increased by the fact that it is shattered by its impact. The effect on the skin of the hard and soft rays might be likened in the one case to the steel-jacketed projectile, and in the other case to the soft leaden bullet with its low muzzle velocity.

The quality of the rays depends upon the vacuum of the tube from which they emanate. A soft or low vacuum tube has none of the hard, or long, or deep penetrating rays, while being rich in the soft or short rays.

The hard or high vacuum tube has both hard and soft or long and short rays, and every gradation from one to the other. There has never yet been a satisfactory explanation of the cause

of radio-dermatitis. Suffice it here to say that there is a limit beyond which we must not go in pouring upon the skin the volume of rays from the tube. We know that if we pour upon the skin the full volume of rays without regard to the dosage, we may produce a dermatitis, ranging all the way from a mild erythema to complete destruction, before we can hope to have conquered the disease at which we aim.

But if we exclude or stop all of the soft and medium rays, we have saved the skin from their bombardment and still have the deep penetrating ray as a very valuable therapeutic agent. If we accomplish this exclusion we have then in operation only the deep penetrating rays which will have as strong an effect on the cancer under the skin, as upon the skin itself. Having the power to pass the obstruction by which the shorter rays were stopped, these long rays may be relied upon to penetrate the skin and superficial tissues, which have much less resistance than the various media used to stop the shorter rays.

We have two methods of x-ray attack on carcinoma cutis but only one on deep seated cancer. A surface growth may be treated very vigorously, using the massive dose with a view to actually destroying it as a similar area of healthy integument would be destroyed under like conditions and dosage, or we may perhaps more successfully combat it by a less vigorous application of the rays, with the object in view merely of depriving the cells of that excess of glycogen which is necessary to their proliferation, and thereby causing their death and the ultimate death of the growth. It is this latter method upon which we must rely, wholly, in fighting the condition in deep structures. Consider briefly this theory and fact of the glycogenic feeding of the cancer cells. The investigation of Brault and others show that malignant formations of all kinds are richly supplied with glycogen and that their increase is in direct proportion to the glycogen they contain, though it is absent from granulomatous new formations.

Freund is another who finds that these tumors are abundantly supplied with sugar forming matters. Many other authorities might be mentioned. It seems beyond doubt that such is the case. It is also noted that glycogen disappears from the blood of a cancer patient when the disease is far advanced and that the normal structures of the patient are very much impoverished by reason of the cancer usurping the supply of glycogen. This product disappears from the blood and normal tissues of the cancer patient, as it does in the starving animal.

Kalz is authority for the statement that normal muscular tissue is endowed with a glycogenetic function and some express the belief, which seems reasonable, that the cancer cell also has that function; that in addition to usurping the glycogen supply of the blood, the cancer cells themselves have a glycogenetic function. The physiological effect of Roentgen rays is a matter for much speculation, in many aspects, but it is known that the glycogen in a tumor rapidly decreases under x-ray treatment.

Shall we, then, accept this as the explanation of the fact that x-rays do cure malignant growths? In support of it I wish to say that I have seen superficial cancers retrogress rapidly and disappear under x-ray treatment, though only light dosage was used, a mild erythema without any vesiculation or tumefaction being the maximum reaction. The argument then is, if we can reach the deep cancer cell with a sufficient dose of the rays to produce this physiological effect, we stop the glycogenic feeding of those cells, stop all proliferation and thereby cause the death of the pathological process.

The form of Roentgen therapy known as the "massive dose" has been used by some operators in the treatment of superficial malignancies, but this I deem an error, as in my experience such ailments are best treated by soft ray therapy. In the treatment of deep seated malignancies it is essential, of course, that the Roentgen rays reach the seat of the disease, wherever that may be, and to secure this necessary penetration requires very heavy dosage from high-vacuum tubes. Since such treatment must be administered through the skin, our efforts are necessarily limited by the intolerance of the skin to x-rays.

The soft rays are most active in producing dermatitis; it is desirable therefore, to dispose of those rays, and yet permit the hard rays to reach and penetrate the tissues. This must be accomplished by means of a filter, because the hard or high vacuum tube which we must necessarily use for this treatment is rich in soft rays, though it also produces the hard rays. For this purpose different substances have been used, and there have likewise been different methods of measuring the dosage.

The substances most commonly used as filters are chamois skin, sole leather (either wet or dry) and aluminum. After some research, and using the three filters named, and finding each of them of insufficient obstructing power, two of them were combined, and in like manner I later came to using all three when a massive dose was to be administered to a deep malignancy. The filter I am employing under these conditions consists of twenty-four layers of chamois skin, dry; one layer of sole leather, wet; and three millimeters of aluminum. I am sure that any other substances would answer equally well, provided they offered approximately the same resistance to the rays. This is apparently a very heavy filter, and in fact it is a heavy filter as filters go. I know of no other operator who uses that much, but it is not really as heavy as one is first led to believe. A brief test with the fluoroscope shows that hard rays pass it in abundance. A radiograph shows that a perfect picture may be obtained with perfect bone detail through the entire filter. This was taken at a focal distance of twenty inches with an exposure of one second and only twenty milliamperes of current passing through the tube. The tube used registered 8 by the Benoist scale.

Accuracy in measuring the x-ray dosage has made the massive dose practicable. Of the several methods used in measuring the massive Roentgen ray dose, the Holzknecht radiometer is most practical. However, instead of placing the reaction piece above the filter, or one-half the distance from the anode to the treatment field, as the inventor intended, I have followed the method of Dr. George MacKee of New York, which consists in placing the reaction piece under the filter, on the skin. This I think is logical. It is the dosage on the skin that we are compelled to gauge, not the dosage on the filter, which, as I have already pointed out, should be of different densities for different cases. The effect on the skin is the thing which, whether we will or no, we must be guided by. The question will no doubt arise, what is the comparative reading of the radiometer, with the reaction piece under, and with the reaction piece on the filter?

I answer: A dose of one and one-half H. units with the reaction piece under the filter is equal to 7 H. units with the reaction piece on the filter. This was determined by test with a 7 B tube at a focal distance of six inches with thirty milliamperes passing the tube. Length of exposure 50 minutes according to a modified Gauss method, or 5 minutes actual exposure.

Another argument in favor of placing the reaction pastille under the filter and on the skin, is that in this way the dose may be accurately measured no matter what focal distance is used in the treatment. It is admitted, I suppose, that the atmosphere is in some considerable degree a filter of the rays. Certainly it takes longer to administer a dose of 4 H. units at a focal distance of 8 inches, than at 6 inches, though otherwise the procedure is used in both treatments. It is my custom to use a focal distance of 6 inches in treating an area 3½ inches in diameter. I would in many cases use a shorter focal distance if possible, but am unable to do so on a plane surface with the tube stand I am now using. However, if a less focal distance is used, a less area must be treated, and inversely if it is desired to treat an area greater than 3½ inches in diameter a greater focal distance must be used. The area treated must be considered in relation to focal distance, otherwise there would be a decided disparity in the dose administered and the effect produced at the center of the field, and at the periphery. Consequently, while we would administer a desired dosage at the center, the outer portions of the field would receive much less than the desired dose and from four to six weeks' delay would be incurred before that portion of the field could be treated with its proper dose. This process is only practicable by use of the Gauss method or some modification of it. Dr. C. J. Gauss, a noted German radiologist, discovered that by rhythmically interrupting the operation of the tube by cutting out the current, the tube could be used for an entire treatment, avoiding overheating the tube and that the process resulted in maintaining the vacuum of the tube throughout the treatment. He contrived an electric rhythmeur for this purpose. This apparatus has the tube inactive two-thirds of the time, using a current load of 5 to 10 milliamperes. The technic outlined here involves the use of 20 to 30 milliamperes and therefore necessitates a much greater inactive interval, which as mentioned before is 9 to 1. The tube is active one second and at rest nine.

Report of three cases treated by the technic outlined.

CASE 1.—Mr. F., age 52. Recurrent carcinoma of left axilla. Original lesion on dorsal surface of left hand, removed several years ago by some escharotic. Duration of axillary

growth two months. Removed surgically, August, 1913, by Dr. V. A. Funk. Biopsy by Dr. Leiterer. On September 11 a movable mass was noted in the axillary space and by September 18, this had doubled in size and was hardened.

Treatment Record: Massive dose September 18. Filter one layer of sole leather and twenty-four layers of chamois skin. Current twenty milliamperes. Value 3 H. units. Time, two hours by a modification of the Gauss method in which the tube was in action one-tenth of the time. Focal distance 6½ inches. Skin reaction deep erythema. Latent period twenty-one days.

Massive dose October 15. Filter one layer of sole leather and twenty-four layers of chamois skin. Value 3½ H. units. Current twenty milliamperes. Time, three hours by modified Gauss method. Focal distance 6½ inches. Skin reaction strong first degree dermatitis. Latent period eight days.

Massive dose Jan. 7, 1914. Filter one layer sole leather and twenty-four layers of chamois skin. Value 3½ H. units. Time, one and three-fourths hours by modified Gauss method, Focal distance 5 inches. Skin reaction, strong first degree dermatitis. Latent period five days. The tumor retrogressed under the first treatment, and disappeared under the second, and has not yet reappeared. Believed to be cured. No sign of recurrence. In perfect health.

Case 2.—J. B., aged 66. Recurrent, postoperative carcinoma of jaw and throat, right side. Duration one year. Complicated by complete motor paralysis of right side.

Treatment Record: Massive dose Sept. 27, 1913. Filter two millimeters of aluminum and twenty-four layers of chamois skin. Current twenty milliamperes. Value 3 H. units. Time, three hours by modified Gauss method. Focal distance six and one-half inches. Skin reaction deep erythema with some tumefaction. Latent period twenty-one days.

Massive dose Oct. 17, 1913. Filter one layer sole leather and twenty-four layers chamois skin. Current twenty milliamperes. Value 3¾ H. units. Time, three hours by modified Gauss method. Focal distance 6 inches. Skin reaction first degree dermatitis with vesiculation. Latent period ten days.

Massive dose Nov. 20, 1913. Filter one layer sole leather and twenty-four layers chamois skin. Current twenty milliamperes. Value 4 H. units. Time, one and three-fourths hours by modified Gauss method. Focal distance 5 inches. Skin reaction very strong first degree dermatitis. Latent period eight days. Following this treatment the tumor disappeared and the face and throat resumed a normal contour. During his cancer process following his second operation a sinus opened in the site of the second wound extending from the sublingual region of the floor of the mouth and extending downward and forward which never closed. It was contemplated to close it by operation but the patient died on Feb. 27, 1914, presumably of the hemiplegia. There had never been any signs of the reappearance of the cancer. No biopsy was had in this case.

Case 3.—Mrs. W., aged 49. Adeno-carcinoma of cervix uteri and vagina. Referred by Dr. V. A. Funk. There had been an amputation of the cervix by some operator in Chicago in October, 1912. Pan-hysterectomy by Dr. Funk in October, 1913. There was an inoperable extension in vaginal wall at this time. Biopsy by Dr. M. L. Curtner.

Treatment Record: Massive dose Oct. 24, 1913. Filter, three millimeters of aluminum, one layer of sole leather and twenty-four layers of chamois skin. Current thirty milliamperes. Value 4 H. units. Time three hours by modified Gauss method. Focal distance 6½ inches. Skin reaction medium first degree dermatitis, with tumefaction and vesiculation. Latent period thirteen days. Examination on December 8 showed the lesion to be retrogressing. On December 8, 9 and 10 treatments were administered through a lead lined speculum. These were given with a soft tube and averaged Tint II, Sabourraud scale. On December 24 a second massive dose was given, of the same value and using the same filter as in the previous treatment, but at a focal distance of 5½ inches. Current, 30 milliamperes. Skin reaction, first degree dermatitis with tumefaction and vesiculation. Four soft tube treatments were given Jan. 5 to 9, 1914, of the value of Tint III, Sabourraud scale. At this time the vaginal wall lesion had disappeared but there had previously appeared an apparent recurrence of the disease at the utero vaginal junction, at the site of closure after operation. Beginning at this time there was a severe internal reaction, appearing as a severe cystitis, vaginitis and proctitis and neuritis of the sacral plexus. This began to subside about March 10, and in three weeks had disappeared, and with it, every evidence of the disease. The patient is in excellent general physical condition.

CONCLUSIONS

1. There has been a great deal of timidity in regard to the therapeutic use of x-rays, the outgrowth of many serious cases of radio-dermatitis, occurring in the days when the powers and limitations of this agent were not well understood.

2. Proper dosage and methods of measuring the dosage have made the x-rays a valuable and safe therapeutic agent.

3. The technic outlined here secures the therapeutic benefits of x-rays in deep seated carcinoma, without serious injury to the skin.

4. This treatment is available in many cases which by reason of location are not curable by surgery, and is to be recommended as the proper procedure when the disease reappears after operation.

126½ North Seventh Street.

DISCUSSION

DR. A. R. SIMON, LaPorte: Only when the cause of carcinoma has been discovered will we be in a position to state how the Roentgen rays effect a retrogression of carcinomatous tissue. I am firmly of the belief that our present day pathologists will solve the problem of the etiology of cancer, and when that day comes it will mean that cancer therapy will be put upon a rational basis. Many means have been recommended to the profession as a panacea for this scourge of the human race, but to my mind the future progress along this line lies with the Roentgen rays and heliotherapy or other ray emanations.

We have listened to a very excellent paper by Dr. McCoy. It indicates that he is following a technic which is getting results. We know that the Roentgen rays cause the tissue cells to lose their power to divide. Whether this be due to the abstraction of glycogen from the cells, or to other chemic change, or whether it is due to some vital change which we do not understand, makes very little difference.

We must remember that the present teaching is to operate on all deep carcinomata which are operable and to use the x-rays only in inoperable and recurrent cases and as a prophylactic. There is a variance from this teaching at the Freiburg clinic, where they are very proud of the fact that formerly they had five operating rooms in their gynecology department, where now they have but one. Roentgen ray and radium therapy have supplanted operative methods at Freiburg.

In a conversation with Prof. Holzknecht (the inventor of the radiometer which Dr. McCoy is using) he stated that he had carefully considered the placing of the pastille above or below the filter and found it preferable to place the pastille in the half distance between the skin and the tube, because the degree of color change produced in the pastille in the half distance was greater and more obvious and therefore less delicate and more easily recognized. As tubes are produced which will deliver only hard rays, we will have to waste less and less of them on the filter. If Dr. McCoy's method of filtration gives more protection I am heartily in favor of it.

I note that there was a long interval between the separate treatments in Dr. McCoy's series of cases. I take it therefore that he gave his massive dose at one sitting. In gynecological work it is advisable to divide the lower abdomen into 4 or 5 fields and treat one of these fields daily with a massive dose, using a different field each day and directing the central ray always at the tissue we are attacking. In this way we can concentrate a good deal more of the effective x-rays on the pathological process and still remain under the erythema dose. This cross-fire method is not new, but it seems rational to me. The areas treated can be easily marked off by covering them with x-ray developer and marking the outlines with a silver nitrate stick.

It has been demonstrated that the skin will stand a great deal more x-rays without erythema if pressure is made upon it during the treatment. The blood supply of the skin has a definite relation to the reaction. If we produce anemia of the skin by the adrenalin method we can give twice the dose without producing a reaction. Another argument in favor of pressure is the displacement of obstructing viscera and therefore easier penetration.

Finally I wish to call attention to the fact that we must be very careful in x-raying diabetic and paretic patients, since here we are dealing with a lowered tissue vitally and a Roentgen ulcer is easily produced.

"TWILIGHT SLEEP" and its sponsors are receiving an unusual amount of publicity of the sort that smacks loudly of professional advertising. A more objectionable piece of commercialism concerning a procedure connected with the practice of medicine has never been seen, and the moving pictures of "Twilight Sleep" in connection with obstetrics, and the public advertising of various professional men connected therewith, is a feature that is very justly condemned by all right-thinking medical men. The very decided objections held by some of the world's greatest obstetricians concerning the safety and value of "twilight sleep" is sufficient to justify the public in listening to the consensus of opinion of the medical profession as a whole rather than to the opinions of a few commercially inclined medical men who are willing to exploit a procedure of questionable merit for the notoriety and financial gain to be secured therefrom.

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EDITORIALS

SENSITIZED BACTERIAL VACCINES

Almost every practicing physician has had more or less personal experience with the use of bacterial vaccines in the treatment of infection. The practical value of this form of therapy—especially in acute conditions—is universally recognized. Although it cannot be said that vaccines are absolutely indispensable in the therapeusis of any form of infection, the results obtained at times as a direct result of the use of vaccines are so self-evident and so striking that their efficacy is not to be doubted. Not only in the cure but in the prevention of disease as well, bacterial vaccines have assumed an importance that can hardly be exaggerated. The great European war now raging has served to emphasize more than any other event the real value of vaccines in the prophylaxis of those infectious diseases usually associated with camp-life and the general unhygienic conditions of battle-scarred districts. The soldiers are immunized not only against these forms of infection but by means of staphylococcus and streptococcus vaccine the attempt is also made to increase their immunity to infection that is apt to develop in a wound. In the practice of pediatrics attention has recently been called to the value of pertussis vaccine as a prophylactic of some value for whooping-cough. It is quite probable that vaccine therapy will be developed to a greater extent than what it is now. With the introduction of newer and better methods of preparing the material it is quite likely that vaccine therapy may again take its place as a most popular therapeutic aid and that it may yield therapeutic results much more striking than those obtained at present.

Ordinary vaccine as generally used consists of dead organisms, the bacteria being killed by heat. Such a vaccine when introduced into the body produces a condition of immunity by stimulating the formation of protective substances known as antibodies whose function it is to destroy the specific bacteria causing the infection. When ordinary vaccine is used, this protective reaction is not immediate; it takes several days before a sufficient number of antibodies are produced. If, however, the socalled sensitized vaccine is used the protective reaction occurs immediately.

Attention was first called to the use of sensitized vaccine by Besredka, in 1912. His method was to prepare the bacteria to be used as a vaccine by mixing them with the specific immune serum containing antibodies for the particular variety of bacteria to be used. The organisms attract the antibodies in the serum, and when injected into the body they are at once acted on by the complement. Bacteria—or any antigen—when properly joined to its specific antibody and to complement lose their toxic properties entirely, or their virulence is so modified or attenuated that they may be administered without fear of dangerous sequelae.

A vaccine prepared in such a way, containing living sensitized bacteria, should certainly be superior for all purposes to one prepared in the ordinary way containing dead bacteria. The superiority of sensitized vaccine appeals to anyone at all familiar with biologic products. The arguments in its favor advanced by those who have had practical experience with it may be summarized as follows:

The bactericidal power of the blood is increased at once. There is a rapid appearance of antibodies in the circulation and these antibodies are present in much larger quantities than after the use of ordinary vaccine. Since the bacteria are already saturated with antibodies they do not use up those which may have been formed in the body in response to the infecting germ, so that there does not result that reaction spoken of as the "negative phase" during which the protective mechanism of the body is lowered for the time being. With sensitized vaccine there is produced little, if any, local or general reaction.

TYPHOID PROPHYLAXIS

With the onset of the vacation period and an increase in summer travel the question of typhoid prophylaxis becomes an interesting one for not only members of the medical profession but the laity as well. Typhoid fever is such a common disease and is so widespread throughout the world that its prevention becomes a matter of the utmost importance.

It has been said that in order to get typhoid one must "either drink it or eat it"; but that is comparatively easy for any of us, considering that typhoid bacilli may be carried by the water or milk supply and through food contaminated by flies or the fingers of those who have come in contact with the infection. While the prevalence of typhoid fever in any community is an index to the sanitary intelligence of that community, it is an acknowledged fact that healthful and sanitary towns and cities suffer from the ravages of the disease as a result of importation of the infection from communities that pay little or no attention to public health and sanitation. Physicians and nurses are especially subjected to the dangers of infection, and the tourist or even the person who seeks a vacation at a nearby resort is very apt to strike places where few if any sanitary safeguards are afforded. Typhoid prophylaxis is, therefore, a matter of utmost importance to such persons and in the light of our present knowledge is known to be efficient and reasonably harmless.

As an evidence of the value of antityphoid vaccination all we need to do is to quote the experience in the United States Army. In the Spanish-American war one-fifth of the soldiers in the National Encampment had typhoid fever. Among 107,973 men there were 20,738 cases, with 1,580 deaths. In 90 per cent. of the volunteer regiments the disease broke out within eight weeks after going into camp. On the other hand, among 80,000 persons vaccinated in the army during 1911 there were only eleven cases of typhoid, with one death among the vaccinated. During 1912 there were fifteen cases and two deaths from typhoid among over 58,000 soldiers, all of whom had been vaccinated. During this time our troops were mobilized at various places, and 20,000 men were encamped in Texas and along our southern boundary where they remained in camp and on march for over a period of four months. Compulsory vaccination was enforced by the Surgeon-General of the Army and this alone is responsible for the low typhoid morbidity and mortality rates.

Concerning the length of immunity, it is not yet known definitely what the duration is following an antityphoid vaccination. At present it is the practice of the Army to re-vaccinate against both typhoid and smallpox at the beginning of each three-year enlistment. The few failures to secure absolute protection is supposed to be due to inefficiency of the vaccine, the exposure of the patient to exceptionally large quantities of infectious material, or the inability of the individual to respond to immunization with the usual antibodies. This failure can best be interpreted as a personal idiosyncrasy. It is thought, however, that though we may fail in exceptional instances to prevent infection, it is very probable that the severity of the disease is modified and the death rate lowered.

The experience with antityphoid vaccination in the United States Army has been duplicated to a far greater extent in the European armies now at war. Practically all of the armies have been subjected to antityphoid vaccination, and never in the history of the world has there been such a low morbidity and mortality rate from typhoid in such an enormous number of persons confined within restricted areas and under sanitary conditions that have not been of the best. The low typhoid morbidity rates, so clearly and unmistakably have been due to the vaccination that in the armies of Germany as well as the Allies, compulsory vaccination is the order of the day, and the results justify the opinion that in antityphoid vaccination we have a method of prevention of disease which is analogous to the efficiency of vaccination as a preventative of smallpox.

Major F. F. Russell, U. S. Army, reports (Cong. Report 1404) that the vaccine or typhoid prophylactic used by the United States Army consists of a suspension of dead bacilli in salt solution to which is added 0.25 per cent. of tricresol as a measure of safety. The vaccine is accurately standardized by counting the bacilli. Five hundred millions are given as the first dose and one thousand millions each for the second and third, ten and twenty days later. The skin of the upper arm is sterilized with iodin and the vaccine is injected subcutaneously. There is a local reaction consisting of a small red and tender area lasting about forty-eight hours. The general reaction, when present, gives rise to a headache and malaise, and sometimes to fever, chills, and occasionally to nausea, vomiting or diarrhea. Severe reactions are exceptional and do not occur in more than one to three persons per thousand. The occurrence of a severe reaction need not give rise to anxiety since they all pass off quickly and leave no trace. No precautions are taken after vaccination other than to warn against use of alcoholic drinks and severe exercises. No hard work is required of the troops during the following twenty-four hours, but they are not excused from the ordinary routine work as a rule. It is the custom in the army to vaccinate simul-

taneously against smallpox on one arm and against typhoid on the other. If the vaccinia is severe, the second dose of antityphoid is postponed a few days, but it has not been necessary to deviate in any other way from this routine. Up to 1914 over 400,000 antityphoid vaccinations had been made with no bad results reported. The absence of bad effects is attributed to the efficiency of iodin as an antiseptic and the presence of 25 per cent. trycesol in the vaccine.

Antityphoid vaccination has a field of usefulness in civil life as well as in the army. Those who in any way come in contact with the sick should be immunized, as also those who live in communities where the typhoid death rate is above the average. In the camps of engineers, contractors and pleasure seekers, where sanitary safeguards are not adopted, antityphoid vaccination is especially valuable and richly repays the time and trouble necessary for its administration. The traveller and the vacationist are especially liable to encounter the infection and should avail themselves of antityphoid vaccination as a preventative measure.

Antityphoid vaccine that is dependable and reliable is now prepared by the leading firms of biologic chemists throughout the country and can be obtained easily. The sensitized vaccine is preferred on account of the lessened chances of reaction and the shortened time required for the immunization.

The point to be emphasized is that the public should be encouraged to employ antityphoid vaccination even more generally than they employ ordinary vaccination for smallpox. In fact the vaccination against typhoid is far more important because the disease is more prevalent.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

New York City is attempting to stamp out the "venereal quack." The authorities will have their hands full in suppressing the activities of the class of leeches that have profited by the frailties of human nature.

We believe that our July number will be well worth preserving. It will be known as "The Cancer Number" and will contain seven or eight papers by prominent members of the Indiana medical profession on the various phases of the cancer question.

The Program Committee for the next session of the Indiana State Medical Association to be held in Indianapolis in September, is anxious to secure good papers from various sections of the state. Those who desire to take part in the program should get in touch with the committee at once.

Pennsylvania has appropriated $4,632,387 for public health work in the state during the next two years. Of this amount, $2,975,807 is for tuberculosis work. If the state officer of health for Pennsylvania does not make a showing with this amount of money at his disposal he is unfit for the high office he holds. Incidentally the liberality of the Pennsylvania law making body is a good example for other states that do not appreciate the economic value of public health work. We venture to assert that every dollar spent in public health work brings an actual return of $10 in dividends.

The Indiana health officers should be reminded that the various resorts require frequent and thorough inspection during the summer months with a view to prohibiting the insanitary conditions that so frequently prevail and are a menace to public health. Every fall there is more or less typhoid which has been contracted at resorts. In northern Indiana there are hundreds of lakes frequented by resorters and at many of them little or no attention is paid to sanitation. These places are under the jurisdiction of county health officers, and Secretary Hurty will be performing efficient service if he insists that the county health officers do their duty.

The Christian Scientists are interesting themselves in legislation exempting their healers from the operation of the various medical practice acts. In reality what they aim to do is to place their healers in a position where fees can be collected legally. It will be an unfortunate day when the legislature of any state legalizes a practice that is so pregnant with danger to the public if permitted to have full sway. The Ohio Legislature has had to contend with three bills introduced for the avowed purpose of making it possible for the Christian Science healers to practice their fakery without let or hindrance. How long will it be before the Indiana legislature also will be called on to consider Christian Science legislation?

THE use of the Roentgen rays in medicine and surgery has had an established place for several years, but it remained for the great European war to develop further uses for the Roentgen ray in the management of injury cases in which a foreign body like a bullet or piece of shell has been embedded in the body. By the aid of the fluoroscope and specially devised instruments the surgeon extracts the foreign body with great rapidity and certainty with a minimum amount of injury to the surrounding tissues. It is very evident that at the close of the war some unique and interesting case reports will be produced, with the attending advancement of our knowledge of surgical conditions and the measures to be adopted for their relief.

EVERY doctor, dentist, and veterinarian living in the United States should bear in mind that the license taken out under the Federal Anti-narcotic Law on March 1 expires on July 1 next. Send $1.00, at once, to your local collector of internal revenue to renew the license for one full year. Remember that the fiscal year begins on July 1 and that the license procured at this time will be good until July 1, 1916. Do not forget this. Remember the confusion, disturbance, and trouble incurred when you took out your first license on March 1, and anticipate such trouble by making application immediately. Also, if you need more of the official order blanks, it is a good time to put in your requisition now. The price of these blanks is one cent each, and they are sold in blocks of ten.

SOME of our readers are favoring us with newspaper clippings indicating the very patent desire on the part of some doctors to secure publicity and notoriety through publication of case reports. An interesting feature is found in the frequency with which certain doctors secure newspaper publicity, and this points to but one conclusion and that is that the doctor whose name frequently appears in the lay press in connection with case reports has made an effort to secure such publicity. There is not one newspaper editor in five hundred who will not respect a doctor's request to refrain from mentioning the name of the attending physician when reporting cases that in the eyes of the newspaper man are deemed of interest to the public. Occasionally a doctor may be given undue publicity without the doctor's knowledge or consent, but when it occurs regularly it is a safe bet that the doctor himself is responsible for it and courts publicity.

THE luetin reaction for the diagnosis of syphilis is worthy of extended trial by the medical profession. In cases of tertiary and late hereditary syphilis there is usually an intense positive reaction, and it is in these cases that the test is of the greatest value. Reaction is usually absent or very mild in the primary or secondary stages, although in these stages it may become positive after energetic treatment. In infants with congenital syphilis it is less marked than in adults with congenital syphilis. Theoretically, the test should become negative only when all of the spirochetes in the body of the patient have been killed. In practice, however, the negative luetin reaction should never be relied upon as an evidence that the patient is cured. Luetin is supplied by the leading manufacturing pharmacists in sterile ampules for ready use.

W. L. VAN CAMPEN is a sailor on the U. S. war vessel North Dakota. Mr. Van Campen writes the State Board of Health for a transcript of his birth record. He says: "I do not know positively that I was born in Indiana, but I have heard my parents say that that state is the place of my birth. I have enlisted in the U. S. Navy for the second time. I have done four years and have enlisted for another four years. In order that I may receive the pay and extras for being a citizen of the United States I have got to have a copy of my certificate of birth. I must prove my citizenship and prove that I was born in the United States." This is interesting evidence of the importance of recording births. If it is found that Mr. Van Campen's birth was not registered in Indiana he will be a loser in that he will not be able to prove his citizenship and receive the pay and allowances which are provided for citizens.

IN a few weeks war has accomplished what years of work on the part of temperance organizations has not accomplished. It has put alcohol out of commission in many of the countries of Europe. It has been discovered that alcohol is the enemy rather than the ally of the fighting man, and in an effort both to maintain and improve the efficiency of the soldier the warring nations have found it necessary to suppress the sale and distribution of alcoholic beverages. Along this line we may say that nearly every business man in this country is now admitting that even the temperate use of alcohol seriously interferes with the efficiency of any man, and

accordingly a great temperance wave is spreading and ultimately will have its effect in suppressing the sale of intoxicating beverages in the United States. In other words, stamping out alcohol is a business proposition and not a moral one, if the best results are to be accomplished. Oftentimes you cannot win a man by appealing to his conscience, but the minute you touch his pocketbook he begins to take notice. Efficiency means dollars and cents and if alcohol impairs efficiency the business man or the general in the army is opposed to it.

From the Pacific Coast comes the complaint that many osteopaths are prescribing medicine and practicing surgery in spite of the fact that according to the Medical Practice Acts they are limited in practice to the procedures taught by their particular schools. The State Examining Board of Washington has announced that prosecutions will be conducted against osteopaths who are shown to violate the law. Incidentally we may say that the Pacific Coast is not the only place where osteopaths, chiropractors, mechanotherapists, and even optometrists are prescribing medicine, and in some cases practicing surgery in direct violation of the law. We have contended that all of the pseudomedical cults desire a short route to the legal privilege of practicing medicine in the good old way, and the current of events seems to have proved our contention. While it is becoming very difficult for any person to secure a degree in regular medicine, it seems to be getting easier to practice any kind of medicine or surgery without a regular medical degree. Will the public ever realize that it takes something more than a sign and self-laudation to make a doctor who is qualified to care for suffering humanity with any degree of intelligence.

Again we desire to caution our readers against giving their influence or support to a horde of irresponsible and quackish sanitariums of one kind and another that constantly are soliciting patients through physicians by circulars which in a most extravagant and objectionable way point out the reputed merits of the institutions, and not infrequently offend the taste of reputable physicians by the most unwarranted commercial propositions. The doctor who is honest with himself as well as with his patient will steer clear of the sanitariums that lose sight of the ethical and humanitarian side of the practice of medicine by putting in the foreground commercial propositions which at once stamp the institutions as unworthy of confidence. The Journal carries the advertising of a number of sanitariums and hospitals that we believe to be worthy of the support and patronage of its readers. Whenever we can secure evidence to the effect that any one of the advertisers are not ethical in all its relations, that minute the advertising of such institution will be taken from The Journal. In our efforts to protect the medical profession we expect to have support, but aside from all this we bespeak support of the institutions that we are upholding.

We are justified in believing that the Harrison Narcotic Law has been religiously followed by all those who deal in or dispense drugs which come within the provisions of the act. The surprising fact has been developed that the supposed millions of dope fiends do not materialize. In fact it has been demonstrated rather conclusively that there was a whole lot of imagination and exaggeration concerning the extent to which drugs—and especially derivatives of opium and cocaine—have been used as an addiction. It also has been demonstrated that many of the drug addicts continue to receive their dope in one guise or another through doctors who prostitute their calling for pecuniary ends. A prosecuting attorney in New York City says that he has discovered that doctors sign prescriptions in blank to be used by druggists in supplying dope to fiends and lamely advances the information that the Harrison Narcotic Law never will be effective as long as such a condition exists. Pray what does the Board of Medical Registration and Examination say about this? Why should not a doctor lose his license immediately on discovery that he is either giving prescriptions or drugs to drug addicts or is in any way using his professional standing for the purpose of furthering the illicit sale of narcotics?

Fee splitting must be up for discussion by the laity out on the Pacific Coast. Someone has favored us with a newspaper printed in Portland, Oregon, which, under the title "The Doctor's Trust," in scarehead type going clear across the page, discusses the question of fee dividing as practiced by some of the surgeons of Portland. Not content with describing fee splitting as a sickening business, it is dealt with editorially as follows:

FEE SPLITTING MUST STOP

Medical men of Portland are prostituting their profession by SPLITTING FEES.

The surgeon gives a commission to the doctor who sends a prospect along.

So you often have to pay for an operation when no operation is needed.

Some of the leading lights of the profession have said they won't pay commissions.

And they are suffering for it.

The physician who takes advantage of your confidence to advise an operation when one is not necessary is worse than the blackest criminal who breaks into your home.

The thief would only steal your money. The crooked doctor would steal your health.

The doctor who advises an operation often puts the fear of God into the sick man.

And he does so for the same reason that the hotel runner steers you against a harlot.

HE IS PAID TO DO SO.

Just as the abortionist was driven out of the medical profession by medical men themselves, so must doctors and surgeons cleanse their ranks from the fee-splitter and the commission or split-fee taker.

VULTURES.—About the lowest business we know of is that of selling sick people medicines that cannot better their condition and that may do them harm. The newspaper to which we pay our compliments in the preceding paragraph (the New York *Tribune*) has recently undertaken a campaign against the quacks who advertise in certain New York journals—the same quacks whose extravagant claims appear in carelessly run newspapers the country over. The *Tribune* reporter found at the Riverside Hospital on North Brother Island, New York, where consumption is treated, that the following medicines were most often used by the patients before they began to have the disease treated properly by physicians:

Eckman's Alterative, Father John's Medicine, Pepto-Mangan, S. S. S., Piso's Cure for Consumption (Piso's no longer describes itself as a consumption cure, but its insidiously worded advertisements still mislead consumptives to use it under its new name), Dr. Pierce's Golden Medical Discovery, Peruna, Hyomei, Creosat-Carbonate, A. D. S. cough preparations.

The tragedy of it is that some of the pale shop girls and other indoor workers who waste their money on these "remedies" might have been saved if they had trusted to competent medical advice, fresh air and nourishing food instead of to the lies and half lies of the patent-medicine kings. The list above is what we call a roll of shame. Look into your home newspaper and see if it carries the advertisements of these "cures." If it does, write a little letter to the editor and tell him what you think of it.—*Collier's Weekly.*

ONE of THE JOURNAL readers writes us that he, in company with many other doctors, has been defrauded by an agent who solicits memberships in a company that professed to sell automobile supplies at or near factory prices. The remarkable feature connected with the complaint is the fact that several readers of THE JOURNAL should have been stung after having been urged repeatedly not to pay any money to agents and not to pay out any money to any firm unless that firm's responsibility has been determined. But aside from all this, THE JOURNAL is rather interested in the complaint because we have been carrying some advertising of a firm dealing in automobile supplies at or near factory prices, and this advertising was not accepted until we had determined the responsibility and integrity of the advertiser. In other words, after safeguarding the interests of the readers of THE JOURNAL by accepting no advertising except from trustworthy firms, a number of the readers of THE JOURNAL ignore the advertising and pay out their good money to an irresponsible agent and perhaps intended for an irresponsible and tricky firm, which leads us to remark that we believe that some doctors not only do not protect themselves or let anyone else protect them, but take special delight in hunting for ways and means to be "stung." Surely there is no "sucker" like a doctor, and we offer this suggestion to the confidence man and the shyster of any description, "If you want easy picking, go to the medical profession."

PUBLIC health officers are reminding physicians that they must report cases of tuberculosis or suffer the penalty as provided by law. Those who would avoid unpleasant complications should give heed to the Indiana law, the pertinent sections of which are as follows:

TUBERCULOSIS—CONTAGIOUS—DUTIES OF PHYSICIANS

SECTION 1.—Be it enacted by the General Assembly of the State of Indiana, that tuberculosis being hereby declared to be an infectious and communicable disease dangerous to the public health, it shall be the duty of every practicing physician in this state to report the name and address of every person known by him to be infected with tuberculosis, to the health officer of the city, town or county in which such person resides, at least five days after such fact comes to the knowledge of the physician; it shall also be the duty of the chief officer having charge for the time being of any hospital, dispensary, asylum or other similar private or public institution to report the name, age, sex, color, occupation, place where last employed, if known, and the home address of every person having tuberculosis who comes under his

care or under his observation, at least five days after such fact comes to his knowledge, to the health officer of the city, town or county from which such patient comes; and it shall be the duty of every authorized school physician to report the name, age, sex, color, school and home address of every school child, teacher or school janitor, having tuberculosis, who comes under his observation in the performance of his duties in connection with the medical inspection of schools, at least five days after such fact comes to his knowledge, to the health officer of the city, town or county in which such child, teacher or janitor resides.

PENALTY

Sec. 6.—Any physician, any chief officer having charge of any hospital, dispensary, asylum or other similar private or public institution, any authorized school physician, any city, town or county health officer, or any owner, agent, or any other person violating any provision of this act shall be guilty of misdemeanor and shall, on conviction thereof, be fined not less than ten dollars ($10.00) nor more than fifty dollars ($50.00).

Practice of Medicine Defined.—To open an office for such purpose or to announce to the public in any way, a readiness to practice medicine in any county of the state or to prescribe for, or to give surgical assistance to, or to heal, cure or relieve, or to attempt to heal, cure or relieve those suffering from injury or deformity, or disease of mind or body, or to advertise, or to announce to the public in any manner a readiness or ability to heal, cure or relieve those who may be suffering from injury or deformity, or disease of mind or body, shall be to engage in the practice of medicine within the meaning of this act: Provided, That nothing in this act shall be construed to apply to or limit in any manner the manufacture, advertisement or sale of proprietary medicines. It shall also be regarded as practicing medicine within the meaning of this act, if any one shall use in connection with his or her name the words or letters, "Dr.," "Doctor," "Professor," "M.D." or "Healer," or any other title, word, letter or designation intending to imply or designate him or her as a practitioner of medicine or surgery in any of its branches: Provided, That this act shall not be construed to apply to nonitinerant opticians who are at this time engaged in, or who may hereafter engage in the practice of optometry in this state, nor to professional or other nurses.

In charging any person in an affidavit, information or indictment with a violation of this law by practicing medicine, surgery or obstetrics without license, it shall be sufficient to charge that he did, upon a certain day and in a certain county, engage in the practice of medicine, he not having any license to so do, without averring any further or more particular facts concerning the same.—Burns' Statutes—Revision of 1914. (Section 8409.)

DEATHS

A. M. Netts, M.D., pioneer doctor of Wells County, dropped dead on the street in Ossian, June 3, aged 77 years.

Mrs. Harriett Cullen, aged 70 years, wife of Dr. J. C. Cullen of Anderson, died May 31 at St. John's Hospital.

Mary A. Soper, M.D., of Danville, graduate of Indiana Eclectic Medical College in 1882, died May 7, of diabetes.

James C. McMasters, M.D., formerly of Valparaiso, died May 8 at the home of his daughter in Francesville, aged 72 years.

John C. Hicks, M.D., died at his home in Napoleon May 7 after an illness of short duration from pneumonia. He was 74 years of age.

J. R. Brown, M.D., pioneer physician of St. Joseph County, died at his home in South Bend May 1 following a three weeks' illness, aged 91 years.

S. D. Adams, M.D., of Brewersville, died April 30, aged 77 years. He was a charter member of the Jennings County Medical Society and a member of the Indiana State Medical Association.

Tyra C. Dollens, M.D., died April 28 at his home at Trinity Springs, aged 80 years. He had been in poor health for some time. Dr. Dollens was a member of the Martin County Medical Society and the Indiana State Medical Association.

Walter J. Mitchel, M.D., formerly of North Vernon but recently moved to Indianapolis, committed suicide May 31, aged 53 years. His act was attributed to despondency over financial difficulties. Dr. Mitchel was a member of the Jennings County Medical Society and the Indiana State Medical Association.

Josiah T. Scovell, M.D., physician, instructor and writer, died at his home in Terre Haute May 8, aged 72 years. He was a graduate of Oberlin College, and took postgraduate work at University of Michigan and at Rush Medical College, Chicago. He practiced medicine at Central City, Colo., and Vermontville, Mich., and later held the Chair of Science at the Indiana State Normal School, Terre Haute. Of late years his explorations and research work among the Aztec ruins of Old Mexico and numerous textbooks and scientific papers have been well known.

Thomas H. Maxedon, M.D., died at his home in Vincennes May 19 following a stroke of apoplexy. Dr. Maxedon was born in Orange County, Indiana, near Paoli, Aug. 13, 1861, received his early education at Paoli and Orleans (Indiana), and taught school for a number of years. He graduated from the medical department of the Central University of Louisville in 1887; practiced general medicine and surgery at Heathsville, Ill., eleven years; took postgraduate work in the New York Polytechnic in 1890, and in 1898 went to Vienna and Austria for further study. In 1899 he located at Vincennes for practice, where he was prominent in medical circles until the date of his death. He was a member of the Knox County Medical Society and the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Dr. Carl Habich of Indianapolis left May 29 to take a postgraduate course at Johns Hopkins Hospital.

Dr. Don Miller is convalescing from an operation for appendicitis performed at St. Vincent's Hospital.

Dr. Woods is at the Methodist Hospital recovering from an attack of septicemia following an infected wound of the finger.

Dr. G. B. Jackson is the new president of the Indianapolis Board of Health, and Dr. Thomas B. Eastman was reelected vice president.

Dr. E. B. Mumford of Indianapolis has been appointed to take the place of Dr. T. Victor Keene as a member of the City Board of Health.

Dr. F. W. Foxworthy of Indianapolis announces the removal of his office from 316 Board of Trade Building to 1135 State Life Building.

The annual state banquet of the Phi Beta Pi Medical Fraternity was held May 22 at Hotel Severin, Indianapolis. Eighty-three physicians were present.

Dr. Asher, who has been on the City Dispensary service, having charge of the out patients in obstetrics, has recently resigned and located at New Augusta, Ind.

The graduating exercises of the Methodist Episcopal Hospital Training School for Nurses were held May 5 at which time twenty-eight nurses received their diplomas.

Dr. Bass of New Orleans recently addressed the dentists of Indianapolis at the Eli Lilly & Co. plant on the subject of entameba buccalis, with especial reference to pyorrhea alveolaris.

Walter D. Thurber, for some time secretary of the State Anti-Tuberculosis Society, has been appointed deputy state health commissioner in charge of the new department of tuberculosis.

Dr. Harold B. Myers has been appointed professor of materia medica and pharmacology at the University of Oregon, and Dr. Howard D. Harkins professor of biological chemistry at the same institution.

Dr. H. C. Parker has turned over his practice at Indianapolis to Dr. E. A. Willis of the Hume Mansur Building and will go to New York and Boston for special work. He will locate later at Dubuque, Iowa.

Dr. John Barnhill has been appointed head of the Ear, Nose and Throat Department of Indiana University School of Medicine. Dr. Cregor has been raised from assistant to associate professor of dermatology.

Dr. J. N. Hurty of Indianapolis recently attended the session of the National Milk Commission in New York City. While there he was the guest of the Society for Sanitary and Moral Prophylaxis which was founded by Prince Morrow, and read a paper on "Moral Aspects of the Venereal Disease."

Miss Margaret Bowen of Indianapolis and Miss Clodia Johnson, superintendent of the Schneck Memorial Hospital of Seymour, sailed May 13 for Red Cross service in Austria.

Dr. J. H. Wheeler recovered his stolen automobile from Cincinnati, Ohio. He went there after his machine and returned with it and two young men, who are accused of its theft. They are in jail awaiting grand jury action.

At the scientific seminar of the University Medical School for April, three unusually interesting and rare cases were presented by students of the senior class. Two cases in the same family of "dystrophia muscularis progressiva" were presented by Messrs. Mackey, Pence and Peters. Mr. Startzman presented a case of "adiposa dolorosa," which showed the lesions of this disease most typically. Dr. Bond spoke on the "Electrocardiograph," and Dr. Gatch on "Some Studies in Intra-Abdominal Pressure."

In order to start students earlier in clinical work and at the same time allow for more hospital work by the seniors, the sophomore class has been assigned to the Medical Clinic at the Dispensary during the second semester.

"Save the Child" was the slogan of the first day's session of the twenty-first annual Conference of Health Officers of Indiana, held at Hotel Severin, Indianapolis, June 1 and 2, and practically the entire day was devoted to the subject of the need of medical inspection in schools. Among other things a resolution was passed prohibiting the public funeral of victims of contagious diseases; a resolution pledging aid in the campaign against alcohol; and other resolutions favoring better disinfection, regulating the sale of eggs, etc.

Dr. J. N. Hurty, Secretary of the Indiana State Board of Health, has received a signal honor by being elected President of the Indianapolis Literary Club at a recent meeting. This club is thirty-five years old and counts among its members such men as President Harrison, Vice-President Hendricks, Vice-President Fairbanks, Vice-President Marshall, Booth Tarkington, James Whitcomb Riley, Ex. U. S. Attorney General Miller, Ex. Secretary of State Gresham, Meredith Nicholson, Charles R. Williams, Louis Howland, General Shaler, and others.

GENERAL

Dr. C. A. Roark has removed from McCordsville to Indianapolis.

Dr. A. B. Thompson, a former Evansville physician, has located at Chrisney.

Dr. and Mrs. C. W. Haywood of Elkhart have returned from a short Eastern trip.

Dr. Mabel Faulds of Gary was married May 4 to Henry Williams of the same city.

Dr. Chas. D. Ryan of Cross Plains is taking postgraduate work at the Cincinnati Polyclinic.

Dr. O. C. Higgins has been appointed a member of the pension examining board of Lebanon.

Dr. C. S. Baker, who has practiced medicine for some time at Chrisney, has located at Evansville.

Dr. John R. Green of North Vernon was elected president of the Fourth District Medical Society.

Construction of the new building for the Epworth Hospital, South Bend, was begun May 12.

Dr. W. Bert Siders, formerly of Millersburg, has located at Warsaw for the practice of medicine.

Dr. C. D. Ehrman and family of Rockport left June 3 for an automobile trip through Colorado.

Dr. T. Joseph Toner of Gary was married on June 8 to Miss Alma M. Hoffmeister of St. Louis, Mo.

Dr. George B. Morris of Petroleum is taking special work in surgery at Harvard University, Boston.

The doctors of Brazil were defeated 24 to 6 in a baseball match with the lawyers of that city on May 14.

Dr. Ira M. Washburn of Rensselaer has been taking postgraduate work at Rush Medical College, Chicago.

Dr. David S. Linvill of Columbia City, who has been quite seriously ill for some weeks, is slowly recovering.

Dr. E. J. Hagenbaugh, formerly located at Elkhart, is now engaged in the practice of medicine at Butlerville.

Dr. Walter J. Cluthe, formerly of Tell City, has located at Evansville with offices at 19144-A Main Street.

Dr. Amos Reusser of Berne has purchased property at Urbana, Ohio, where he expects to establish a sanatorium.

Dr. E. S. Baker and family of LaFayette have returned from Ocean Park., Calif., where they spent the winter.

Dr. A. W. Vincent of Valparaiso was stricken with apoplexy, June 1, and is in a quite serious condition.

The cornerstone for the new King's Daughters' Hospital at Madison was laid May 7 with impressive ceremonies.

A free clinic is held every month at the Plymouth Hospital under the auspices of the Marshall County Medical Society.

Dr. and Mrs. A. C. McDonald of Warsaw are taking an extended trip through the West, including a visit to the Exposition.

Dr. B. H. B. Grayston of Huntington recently underwent an operation for appendicitis at the Huntington County Hospital

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Dr. C. A. White and daughter, Mrs. E. M. Blessing, have returned from Gulfport, Miss., to their home at Danville, Indiana.

One hundred and fifty members of the Indiana Institute of Homeopathy met in convention at Indianapolis on May 18 and 19.

Dr. Chas. A. White of Danville has returned home from Gulfport, Miss., where he has been spending the past few months.

Mrs. W. J. Hurt, wife of Dr. W. J. Hurt of Waynetown, who has been very ill at St. Vincent Hospital at Indianapolis, is improving.

The annual meeting of the Fourth District Medical Association was held at Seymour, May 20, with Dr. D. E. Johnston, president, presiding.

Fifteen nurses were graduated from the City Hospital Nurses' School, Indianapolis, on May 14. Dr. Henry Alburger delivered the address.

Seven nurses received their diplomas at the fourteenth annual commencement of the Union Hospital Training School, Terre Haute, which was held May 24.

Dr. M. D. Price of Nappanee is suffering with a broken limb, the result of a fall down the stairway leading to the garage in the Price and Price Hospital.

Drs. B. Van Sweringen, M. F. Porter and E. E. Morgan, all of Fort Wayne, have been appointed local representatives of the American Red Cross Society.

Dr. F. L. Sharrer and family, who have been in Guthrie, Okla., for the past year, have returned to Francesville and the doctor will continue his practice.

Dr. M. D. Stevenson, noted eye, ear, nose and throat specialist of Akron, Ohio, died May 21 from blood poison resulting from a minor operation; aged 39 years.

Dr. Otis Nesbit and family of Valparaiso are taking a Western trip and will attend the annual session of the American Medical Association at San Francisco.

Dr. and Mrs. J. M. Miller of Decatur left May 30 for Los Angeles, California. They will visit a number of Western points, including San Francisco and the Exposition.

Dr. E. W. Poinier, formerly of Andrews, but who has been in Chicago for the past year, has opened offices at Huntington and will continue his practice in that city.

Dr. James S. Shaffer of Terre Haute was married April 10 to Miss Mignon Warrick of Terre Haute. They left immediately for a two months' trip through the West.

Dr. F. E. Ray, who has been in the drug business at Indianapolis for several months, has returned to Shelbyville and will resume his practice of medicine at that place.

Dr. Russell Wharton, who graduated from Rush Medical College a year ago and has just completed a year as intern in the St. Louis City Hospital, has located at Gary.

Dr. J. George Adami of McGill University has been appointed editor of a medical history of the war and has gone to England to begin his work in the British War Office.

Dr. B. S. Potter, superintendent of the Marion County Asylum for Incurable Insane, together with his family is taking a trip through the West, including a visit to the Exposition.

Dr. Orville Goddy of Paris Crossing, Dr. W. H. Stemm of North Vernon and Dr. John H. Green, North Vernon, compose the new Board of Pension Examiners at North Vernon.

Dr. W. T. Ferguson, one of the oldest practicing physicians of Fort Wayne, submitted to the amputation of his left leg below the knee recently. His right limb was amputated nine years ago.

Dr. and Mrs. J. C. Hardesty of New Castle have returned from a seven weeks' trip in the West where they visited their daughter in Arizona, and also spent some little time at the Panama-Pacific Exposition.

The marriage of Dr. Oliver O. Alexander of Terre Haute, to Miss Anna Elizabeth Marshall, was solemnized April 24 at St. Stephen's Episcopal Church at Terre Haute. They left immediately for a western trip.

Dr. and Mrs. J. A. Craig of Greenwood, with a party of friends, left June 1 for an extended trip through the West, including San Francisco, and will attend the annual session of the American Medical Association.

Dr. George Phillips Evans, who has been practicing general medicine and surgery in West Virginia, has located at Tocsin, Indiana. He was a 1908 graduate from the College of Physicians and Surgeons of Baltimore, Md.

The Williams Hospital at Lebanon is now completing a new wing that increases its capacity to 30 beds. An emergency room, laboratory and several other features have been added that will very much increase the efficiency of the building.

The Abbott Alkaloidal Company announces that owing to the rapid expansion and broad generalization of its business as manufacturing and importing chemists they have deemed it expedient to change the corporate name to The Abbott Laboratories.

Dr. J. C. Fleming and family of Elkhart have left for a six weeks' trip through the West. They will attend the Panama-Pacific Exposition at San Francisco and attend the annual session of the American Medical Association, June 21 to 25.

Dr. Samuel T. Zaring, formerly chief of laboratory on the Canal Zone, has been sent by the International Health Commission of the Rockefeller Foundation to the Malay States for the purpose of studying tropical anemia and other diseases in the Far East.

Dr. Charles E. Gillespie of Seymour left May 21 for California. He will visit the Exposition at San Francisco and also attend the annual meeting of the American Medical Association and the Elks' National Convention, the latter being held at Los Angeles.

The American Pharmacy Company of Evansville, The Hiatt Germicide Company of Richmond and the Dr. Emmons Throat and Lung Company of Richmond were recently fined $100 each for violating the federal food and drug act in misbranding drugs.

The County Council of Marion County recently voted down a request for the appropriation of $80,000 for the erection of a new county tuberculosis hospital, but an appropriation of $12,000 was voted to be used by the county commissioners in purchasing a site for such a hospital.

A gift of $100,000 to the Indiana University was made recently by Dr. Luther Dana Waterman of Indianapolis, professor emeritus in the Indiana University Medical School. The gift was made on the condition that the university would appropriate an amount equal to the income from the gift, the entire proceeds to be used for scientific research.

During May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies: Hoffmann-LaRoche Chem-

ical Works: Papaverine Hydrochloride, Roche; Papaverine Hydrochloride, Roche, Tablets; Papaverine Sulphate, Roche, Ampules. Hynson, Westcott and Co.: Ouabain Ampules, H. W. and Co. Merck and Co.; Papaverine Hydrochloride, Merck.

Dr. Samuel G. Dixon has received his fourth appointment as commissioner of health of the state of Pennsylvania, having already served ten years in this capacity. Under his able direction the Pennsylvania Department of Health has achieved one of the first places among public health organizations in this country, and the work which has been accomplished has attracted attention at home and abroad.

The Sixth District Medical Society met in regular session at Cambridge City on May 27, carrying out the following program: "Treatment of Nasal Obstruction," George H. Smith, New Castle; "Diagnosis of Pulmonary Tuberculosis and Fundamental Principles Underlying its Treatment," Kennon Dunham, Cincinnati; "Significance of Frequent Urination," E. O. Smith, Cincinnati; "Some Medical Aspects of Intestinal Stasis," Filliam H. Foreman, Indianapolis.

A commemorative dinner was given June 4 at the Arlington Hotel, in Richmond, in honor of Dr. T. Henry Davis, Richmond's oldest physician. Fifty physicians and prominent men of the state were in attendance, and hearty good-fellowship and a spirit of unfeigned congeniality and friendship were expressed throughout the entire evening's entertainment. Dr. Louis F. Ross presided as toastmaster and toasts were responded to as follows: "Dr. Davis and the State Board of Health," Dr. J. N. Hurty; "The Past and Future of Medicine," W. D. Foulke; "Doctor and Patient," George H. Knollenberg; "Dr. Davis as a Friend and Citizen," D. W. Comstock; "Dr. Davis and the Profession," Dr. D. W. Stevenson; "The Old Days," Dr. D. H. Dougan; "Yesterday, Today and Tomorrow," Dr. T. Henry Davis. Throughout the talks, the virtues and characteristics of Dr. Davis were expressed, and his services to the profession, the city and the state were recalled and commended.

The Annual Health Officers' Conference.—The Twenty-First Annual Conference of Health Officers was held at Indianapolis under the auspices of the State Board of Health, June 1 and 2; 289 were in attendance. All sessions were held in the auditorium of the Hotel Severin, which was headquarters. Eleven instructors were active in presenting their subjects and giving general instructions. Dr. W. A. Thompson, who has distinguished himself by writing and publishing the Union County Health Book, told how his efforts were received and what good he expects will result. The book written by Dr. Thompson is an excellent production and he placed a copy in every home in his county. Dr. Porter Linthicum, health officer of Evansville, gave an excellent talk on "The Need of Medical School Inspection and Laboratories in Cities." Other speakers and subjects were: "Public Health and Hygiene of Our Public Schools," George R. Osborn, health commissioner of LaPorte County; "Some Indiana Schoolhouses," Prof. J. B. Pearcy, state high school inspector; "Pure Food and Drug Laws," H. E. Barnard; "Tuberculosis Law of 1915," W. D. Thurber; "New Legislation," W. F. King; replies to questions from question box and general instructions, J. N. Hurty. Attorney General Richard Milburn gave a talk on "Our Insanity Laws." Dr. M. N. Hadley of Indianapolis gave an excellent presentation of the cancer situation and what can be done for its prevention. Dr. Burton B. Myers gave a lecture entitled "The Kallikak Family." No talent outside of Indiana was invited to aid at this conference. Three committees were appointed; on resolutions, legislation, and alcohol respectively. The committee on legislation reported emphatically in favor of an all time health officer law and its suggestions and motions were unanimously adopted. The committee on alcohol reported that it was certainly the duty of all health officers to engage actively in the campaign against intemperance, classing alcohol as a race poison and the cause of much disease, and these reasons were enough to present why health officers should be active temperance workers.

PUBLIC HEALTH

That Doctor is an enemy to his patrons, to the state and to the science of medicine, who refuses or neglects to report his births, deaths and cases of dangerous infectious diseases.

Moses is wanted in every nook and corner of Hoosierdom. "And he (Moses) removed the swarms of flies from Pharaoh, from his servants and from his people; there remained not one." (Exodus 8.31.)

It is very difficult, almost impossible, to "clean" a diphtheria carrier, if diseased tonsils or adenoids exist, without removing them. Of eighteen diphtheria carriers, sixteen became free from germs within two days after removal of tonsils.

The interstate quarantine regulations of the U. S. Public Health Service are the result of the careful and long time study of the U. S. Public Health Service and State Boards of Health. The said regulations will soon be published and promulgated by the U. S. Public Health Service.

Three Important Meetings.—June 7 and 8 the National Commission on Milk Standards met at the Academy of Medicine in New York. On June 14 the Boards of Health of the United States met in conference at Washington with the U. S. Public Health Service, and on June 15 the Annual Conference of State and Provincial Boards of Health was held in the Willard Hotel in Washington, D. C. Dr. Hurty, state health commissioner, represented the state at all three of these meetings.

Ex-President William H. Taft is chairman of the Board of Directors; Prof. Irving Fisher is chairman of the Hygiene Reference Board and Gen. Wm. C. Gorgas, Consultant Sanitarian of "The Life Extension Institute." This institute is designed to prolong life, and increase efficiency and happiness. Mr. Elmer E. Rittenhouse is president and Dr. Eugene Lymen Fisk Director of Hygiene. The address of The Life Extension Institute is 25 West Forty-Fifth Street, New York. This is a *man making,* not a money making organization. Write and secure full information.

"Cleaned his meat shop as thoroughly as it could be done." This sentence occurs in a letter from Ligonier, Indiana, and is signed by the proprietor of a meat market who had been told that he must clean up or shut up. He preferred to clean up and therefore the alternative did not become necessary. The letter from the meat-market man was in part as follows: "We received your order of April 12 and have obeyed what it says. Our refrigerator has been cleaned good and the shop has been cleaned from front door to back door, and we have cleaned our sausage room, so we have done the best we can in regard to your letter and will keep everything hereafter as clean as possible."

A Model Law to provide for the notification of the occurrence and prevalence of certain diseases has been written and will be promulgated by the Conference of State Boards of Health with the U. S. Public Health Service. The United States and state health authorities see very clearly the time is at hand when more accurate morbidity statistics shall be secured. Without such statistics it will be impossible to make further advancement in public health work; and, further, not until all-time health officers administer health laws, will better morbidity statistics be secured.

Violators of Quarantine disregard the golden rule. Doctors sometimes say, "This is mild scarlet rash, I won't report it and you say nothing." This is really a conspiracy against the public health. It is treason, for such an arrangement makes for the destruction of the country and the government. Malaria destroyed Greece and Rome. Had this disease knowingly been fostered by doctors who wished to curry favor and by citizens who wished to avoid the inconvenience of quarantine, then said doctors and said citizens could have been justly charged with treason.

Health First is the motto of the exhibit now being constructed by the State Board of Health. Every card, every banner, every streamer and every chart in the exhibit is in color, is illustrated and is headed HEALTH FIRST. It is intended to send this exhibit to high schools throughout the country where it will be displayed in the halls to be studied by the pupils. Prizes will be given for the best essays upon either some part or the whole exhibit. The exhibit will clearly present the result of the neglect of children's health and also illustrate what shall be done to bring children to efficient adult age. Of course, emphasis will be laid upon the prevention of infectious diseases. A carefully prepared printed lecture descriptive of the exhibit will be supplied for guidance of the teachers and for the instruction of the pupils.

The all-time health officer is being discussed in almost every state and is strongly urged and recommended by the U. S. Public Health Service. At recent public health meetings held in Washington, writers and speakers agreed that public health work is a distinct profession and

furnishes a distinct career. Dr. Rosenau, professor of hygiene and sanitary science, at Harvard University, says: The degree of Doctor in Public Health should be equal in requirements to the degree of Ph.D. Dr. Rosenau also called attention to the fact that some of the greatest sanitarians the world has known were not doctors, and in support of this contention mentioned Waring, Whipple, Sedgwick, Pasteur and others. The Harvard Department of Hygiene and Sanitary Science gives the minor degree of Certificate in Public Health and also the major of Doctor in Public Health.

Logansport's water supply is at last satisfactory and the citizens are being congratulated. For years this city suffered from typhoid fever. The disease would increase and diminish and was endemic. At last it became persistently epidemic and lives were being lost until Logansport "led all the rest." At last the people were aroused and a filter plant for the purification of the water supply was installed. Dr. Clark Rogers on May 12 published the following notice:

> Inspection and examination of the Logansport filtration plant having been completed by the Board of Health, and the water supply therefrom having been found suitable for drinking purposes, this notice is hereby given to the public that the city water supply is safe for drinking and domestic use.

This notice is the official announcement of a public health work which should have been done ten or fifteen years ago.

Elwood health conditions are to be better, for at the regular monthly meeting of the Merchants' and Manufacturers' Club, held at the Public Library the first week in May, a resolution was passed urging the city council to make an appropriation and pass ordinances which were necessary for the improvement of the public health. The club expressed itself emphatically as favoring the spending of more money on the city's health department and employing a city health officer at a salary sufficient to enable him to give his entire time to the work. The coming of the all-time health officer is assured. The question is—shall the state wait longer than the meeting of the next legislature? The State Board of Health has repeatedly said—no further advancement in public health, no further reduction of the morbidity and mortality rates, need be expected until the all-time health officer appears on the scene.

"They live in a pen and drink ditch water." This sentence is from a report of Dr. Chance of Windfall, who gave "inanition" as the cause of death of a new-born child. He was asked from the office of the State Board of Health to please state the disease causing the inanition. Dr. Chance's letter further stated in part: "It is a wonder the baby was ever born alive. In the first place the parents are related, both are of low birth, both are getting old and this is the fifteenth child born to this mother, only three children living. The child weighed three pounds." In regard to this report we wish to ask how long will the state permit conditions like this to exist? Parents of low mentality and physical grade will, of course, have weak children. If such children do not die they will likely become charges on the state in due time. Dr. Chance here reports a remarkable fact, namely, that this is the fifteenth child and only three of them living. This is certainly a heavy mortality and it seems fair to construe it as an effort of Nature to get rid of the unfit, and in this laudable effort Nature does not seem in the least to regard the apathy and inaction of the state.

Princeton, county seat of Gibson County, sends to this office the first city clean-up report. Very few of the cities and towns of Indiana have neglected or failed to have clean-up days, but Princeton is the first to make a report. At the suggestion of Dr. A. R. Burton, the city board of health requested Mayor Head to issue a proclamation for "Clean-Up Day." Dr. Burton in his report says: "The woman's civic club made a complete canvass of our city. The committee appointed for this work was composed of Mrs. Branham, Mrs. Taylor, Mrs. Ennis and Mrs. Burton. The board of health furnished literature for distribution which consisted of notices to the householder to clean up and pamphlets on how to clean up and how to dispose of the collected debris. This committee, supplemented by the help of young ladies, visited every house and every business place in the city. Only in very rare instances did they meet opposition and invariably they found those who were opposed belonged to that class of whom it was said: "They that are filthy, let them be filthy still." Where the householders were slow or reluctant in cleaning up, orders were issued by the city board of health. The city police loaned their services, which were very valuable and greatly

appreciated. In several instances, where a new tenant had occupied a house only a short time, or felt that he was not responsible for the accumulations of trash and filth of years standing, such persons, while having probably a just cause for complaint, were induced to move the same. The committee of ladies of the civic club has been retained for a year and will continue to assist the board of health. Of course, they receive no remuneration except that of duty well performed and the satisfaction of a cleaner and better city."

The report of Dr. Burton closes with this appeal: "The citizens of Princeton surely appreciate that our city is a veritable park, and not to keep it clean and neat would be a sin. Therefore, let us see to it there are no more accumulations of trash and dirt in Princeton. The way to clean a city is to keep it clean. Don't make dirt. The person who throws paper and trash into the street is not a good citizen and friend of Princeton. See to it, Mr. Citizen, that your premises are kept free from rubbish. Trim the dead limbs out of your trees. Rake your yards. Never throw waste paper on the ground, but keep it in a proper receptacle. Keep your garbage in a metal can tightly covered and protected from flies and frequently emptied. Have no manure piles. Keep manure in boxes or bins covered and fly proof."

This is an excellent report, but all of it is not printed above because of lack of space. In connection therewith, we wish to make note of the fact there is no mention of support from the business men in the important business matter of cleaning up the city. The credit is given largely to the Woman's Civic Club, to the young ladies who offered their services, and to the schoolchildren. Cleaning up a city is an important business matter and the State Board of Health sincerely hopes the day is close at hand when the business men of the state will fully understand that the most important business they have to attend to is the business of the public health.

The National Commission on Milk Standards held its annual meeting in New York at the New York Academy of Medicine, May 7 and 8. There are twenty members, Health Commissioner Hurty representing Indiana. The duty of the commission is to determine standards for milk and all milk products for the guidance of legislative authorities. Such standards are essential to efficient milk control by public health authorities, for the protection of the consumer, and also for the well-being of the milk industry itself. It is clearly the duty of health authorities to see to the source of supply of milk, and to see that the chemical composition corresponds with established definitions of milk as a food. The commission has drawn up a set of standard rules and regulations for the control of milk. These are based on exhaustive scientific studies and investigations by the members and on the conclusion that milk should be graded and sold on grade, just as wheat, corn, beef, butter, eggs and other food products are graded.

Three grades of milk are recommended as follows: *Grade A.* Raw milk, shall come from cows free from disease and shall be produced and handled by employees free from disease, and the bacteria count shall not exceed 100,000 per cubic centimeter, and the dairies producing this milk shall score at least 80 on the United States Bureau of Animal Industry score card. *Grade B.* Milk of this class shall come from cows free from disease, shall be produced and handled under sanitary conditions such that the bacteria count at no time exceeds 1,000,000 per cubic centimeter. Milk of this class shall be pasteurized, and the bacteria count shall not exceed 50,000 per cubic centimeter. *Grade C.* Milk of this class shall come from cows free from disease and must be produced under conditions such that the bacteria count is in excess of 1,000,000 per cubic centimeter. Milk of this class shall be pasteurized or heated to a higher temperature, and shall contain not to exceed 50,000 bacteria per cubic centimeter. This milk is to be used for cooking or manufacturing purposes only. Cream shall be classified in the same grades as milk, in accordance with the requirements for the grades of milk, excepting the bacterial standards which in 20 per cent. cream shall not exceed five times the bacterial standard allowed in the grade of milk.

Standard milk shall contain not less than 8.5 per cent. of milk solids not fat, and not less than 3.25 per cent. of milk fat. The Commission on Milk Standards also passed on standards for cream, buttermilk, homogenized milk or cream and adjusted milk. The work of this commission has the official acceptance of the U. S. Public Health Service and is promulgated by said Service. Anyone can secure a pamphlet on this subject by writing to the U. S. Public Health Service, Washington, D. C.

SOCIETY PROCEEDINGS

INDIANAPOLIS MEDICAL SOCIETY

Meeting of April 20—Hotel Washington

Dr. G. B. Jackson read a paper on "Discussion of Cesarean Section in Relation to Border Line Cases."

What are "Border Line Cases?" What constitutes the competitive field of this operation?

1. Obstruction to labor mainly:
   (*a*) Relative disproportion between the size of birth canal and fetus.
   (*b*) Abnormal presentations.
   (*c*) Abnormalities of the birth canal other than disproportions of size: i. e., neoplasms, malformations (double vagina, atresia, etc.).
   (*d*) Impacted face (mento post.) or shoulder.
2. Placenta previa or "concealed hemorrhage." (Abrupt placentae.)
3. Eclampsia.
4. Rupture or threatened rupture of the uterus.
5. Other emergency conditions, e. g., prolapse of cord, heart disease, etc.

Particular emphasis was laid on the duty of the general practitioner to make more careful examinations of patients before labor.

Also the need of capable consultant and the proper environment, preferably the hospital, in all abnormal cases.

Dr. A. S. Jaeger reported a series of eight cases of cesarean section. In each of four of these cases the mother and child lived. They were private patients in private hospitals. The mothers of the other four cases did not recover. They were all City Hospital cases and had been let go too long, except one who developed measles within twenty-four hours, followed by double lobar pneumonia.

DISCUSSIONS

Dr. Holmes: Kelley's observations show that obstetrics are done as poorly now as fifty years ago. Cited a case in which mother weighed 265 pounds delivered with high forceps. Later examination showed a cervico-vesicle tear. Cited statistics showing sixteen cases in twenty-six due to contracted pelvis; that in nineteen cases no one had more than two fingers' dilatation and all had severe ante partum hemorrhage. Cesarean section holds out better chance of saving life of child and mother when we encounter a primipara with marginal or central placenta praevia or a multipara with central placenta praevia where the cervix is rigid or undilated, provided the child is viable and the mother is a safe operative risk.

Dr. Bernays Kennedy: Choosing cesarean section is determined by desire of greatest conservation of life and permanent health of mother and child. Environment and skill of the operator help determine choice of cesarean section. Individual cases should be studied. Would rule out hebotomy, because the parts cannot be restored, in cesarean section they can. It would probably be better to never use high forceps. A thought of the woman's future can decide this. A hysterotomy would seem better for eclampsia.

Dr. Ferguson: Paper emphasizes the fact that obstetrics are getting out of a rut. Two lines of argument confront the man looking up literature. There are two sides to the question. Cited a case operated in which the patient asked for cesarean section in case she was delivered again. In contracted pelvis three and one-half inches or less, I would advise cesarean section.

Dr. Beckman: I feel that the operation should not be feared as high forceps. Asepsis in obstetrics nowadays is vile, terrible. Subsequent pregnancies must be considered. No doubt they will have to be similarly operated. Cited a case showing specimen, aged 29, after labor five hours developed hemorrhage and collapse. Investigation showed ruptured uterus with placenta in abdominal cavity. When head is not engaged there is no indication for forceps.

Dr. Burckhardt: There are always two sides. Prenatal care will determine in many cases the method to choose of delivery. History and examination help. If a woman has borne a child before maybe she can this time. Training in asepsis is the most important thing to teach our students. Cited a case of a one-sided pelvis in which a normal delivery was made.

Dr. Padgett: I taught students the use of pelvimeter, but have never seen a case with a practitioner who had used the pelvimeter. Cited case of primipara, breech presentation, narrow pelvis. Decided on traction method. Later found symphysis separated an inch, together with a laceration of urethra and bladder. This was a case for cesarean section.

Meeting adjourned.

Attendance sixty.

Meeting of April 27, 1915

Dr. Kennon Dunham of Cincinnati read a paper on "The Study of Abnormal Thoracic Density as Applied to Pulmonary Tuberculosis." This meeting stands out as one of the banner meetings of the year as Dr. Dunham is a master in his line. He handled the subject from a Roentgen-ray standpoint and illustrated very fully both by stereoscope and slides every phase of abnormal thoracic density as applied to pulmonary tuberculosis.

Drs. Cole, Kimberlin, Dodds and Lindenmuth discussed Dr. Dunham's work at length.

Meeting of May 4, 1915

Dr. F. C. Cregor read a paper on "Leukoplakia."

Abstract: Leukoplakia may be defined to be a white patch located on a mucous surface. The symptoms may be those of pain or not, the appearance may be like a vegetating mass, which is traversed by fissures. It may be said to be the result of irritation plus any infective agent that may be present to seize on the occasion. One must be able to diagnose between a leukoplakia resulting from the simplest form of irritation, from lichen ruber planus, and to recognize the presence of syphilis. The laboratory has its limitations for the reason that latent syphilis gives us a great number of negative Wassermanns. The *Spirochaeta pallida* is very hard to differentiate from their similar morphology. The luetin test is of considerable value as a means of aiding in the diagnosis of latent syphilis. Carcinoma is very prone to develop in chronic leukoplakia. The prognosis is usually good so long as the case has not gone beyond a hyperkeratosis or parakeratosis. Treatment consists of

the recognition of all of the elements entering into the pathologic process and of their removal. Leukoplakia is not an entity, but is a symptom of irritation which may be influenced by many different elements.

Dr. Wm. Sharp reported "Two Unlike Cases of Luxation of the Crystalline Lens."

Abstract: There are three principal types of luxation of the crystalline lens. The congenital type due to a shortening or unequal width of the zonula in different directions. This is a subluxation and is known as *ectopia lentis*. The spontaneous type caused by atrophy of the zonula, and often accompanies degeneration of the lens and fluid vitreous. The traumatic type, which may occur at any period of life. Etiologically the following cases represent the two latter types:

Case 1.—Miss N., aged 22 years, in an excited state of mind says, "Something has happened to my right eye, for when I awoke this morning I could see light, which I have not been able to do for the past twenty years." In 1893 she consulted the late Dr. J. L. Thompson for a complication of cataract with iritis. Has given her no trouble since. Found the lens dislocated and floating in lower and outer portion of vitreous, partly adherent to papillary border. Movements of the globe caused it to bob up and down before the pupil. A week later the lens could not be seen even under a mydriatic and with strong lens and ophthalmoscope. Probably caught in ciliary processes and lost to view. Could see fundus clearly with + 10 D. S. Old patch of chorioretinitis to left of disc. Vision increased to 5/12 with + 10 D. S. + 0.50 D. C. Ax. 1300 vis. left eye, 1/12, increased to 5/6 with — 1.50 D. S. = —3.50 D. C. Ax. 90. Refused to wear glasses because "it made her look old." Such cases are often made sensational articles in newspapers. She was advised to consult a Christian Scientist by friends. Had she done so, she and her friends would have attributed the restoration of vision to faith and prayer.

Case 2.—Mrs. J. A. C. Six weeks previous to seeing me, her child playfully threw a small cake of yeast at her, which struck the inner portion of left eye, since which time she has been unable to see. No pain or inflammation at the time nor since. Examination showed a tremulous iris, a deep anterior chamber with some floating bodies. I could see the edge of the lens clearly to the left of the pupil. Could also see a normal fundus with a + 10 D. S. with ophthalmoscope. Vision improved to 5/60 with = 10 D. S. Sixteen days later, under free iodin, the floating bodies had disappeared. Vision with + 12 D. S. = 5/5. The lens and capsule were intact, no doubt, as the pupil was perfectly clear. This was her better eye, as the right eye was amblyopic from an uncorrected compound myopic astigmatism; the vision was but 5/60. This case shows that a slight blow, properly directed on a normal eye, will rupture the zonula and dislocate the lens.

Dr. Vincent Lapenta reported two cases as follows:

"Acute Perforated Pyloric Ulcer Complicated by Acute Appendicitis."

Abstract: Gastropyloroduodenostomy, with excision of the ulcer bearing area for acute perforated ulcer in the pyloric canal.

Case 1.—Mr. C. P., aged 26 years, was seized on May 16, 1914, with an acute excruciating pain in the upper abdomen. The intensity of the pain caused him to fall to the ground unconscious, vomiting small quantity of blood. About one hour after this happening, he was seen and found pulseless at the wrist, cold, clammy sweat covering his body, respiration entirely thoracic, and his face had a very pinched and blanched expression. He was found sitting in bed with the body acutely flexed on the knees. No information or clinical history could be obtained from him. All the facts on which to evolve a working diagnosis had to be obtained from bystanders who had witnessed the attack and knew nothing about the patient. The diagnosis of perforated gastric ulcer instinctively fixed itself on my mind. An acute perforated appendicitis could cause the same type of shock, but I have never seen the occurrence of hematemesis in these cases. The patient was quickly taken to the Protestant Deaconness' Hospital, a hypodermic of morphin 1/4, atropin 1/150, was given and a hasty preparation made for an abdominal section. A long paramedian incision was made on the epigastric region, extending down to the right iliac fossa. On opening the peritoneum a large amount of blood and gastric contents escaped. A careful surgical toilet was made and the examination of the viscera started at the stomach. Exactly in the pyloric ring and in the lower outer portion of it, a large perforation, large enough to admit the index finger, was found. This was certainly a fortunate location for the perforation, as it enabled me to make a wide excision of the ulcer bearing area, and it was possible to restore the pyloric end of the stomach, insuring a large pylorus by employing the technic of Vidal, affecting a gastropyloroduodenostomy. To my astonishment, on examining the iliocecal juncture, the appendix was found to be acutely inflamed and with a clean-cut perforation, with a little fecalith just extruding from it. The appendix was removed in the usual manner. The abdomen was properly closed, with adequate drainage being provided at the lower angle of the incision. The recovery was uneventful, the patient leaving the hospital in three weeks.

Case 2.—"Gastric Hemorrhage from Extensive Ulcer." Mrs. C. F., aged 33 years. Intermittent hematemesis, for a period of two or three years. In the last three weeks previous to operation she had slight attacks daily and large attacks every three or four days. Previous weight 140, present weight 90. Gastric function was first disturbed five years ago. Diagnosis, gastric ulcer of lesser curvature. Dec. 8, 1913, an inferior longitudinal transmesocolic gastrojejunostomy was performed, and the lumen of the proximal duodenum was reduced by a method of duodenal plication. The lesser curvature of the stomach was the seat of a large ulcerative process, surrounded by an indurated area, with considerable adhesions. The ulcerative process did not involve the pylorus nor the pyloric antrum. A large duodenal ulcer was also found about two and a half inches from the pylorus. I have reported this case with the object of emphasizing the beneficial effects of properly performed gastrojejunostomy in the treatment of gastric and duodenal ulcers, even in extensive ulcerative processes, such as we had in this case. The curative action of gastrojejunostomy, displayed in this case, is truly remarkable.

DISCUSSION

Dr. Erdman: Many of us see patients with white patches, some of which are considered important and some not. In six years of clinic work I have never seen a case of leukoplakia go on to carcinoma. Shamburg says users of tobacco get well on discontinuance. Continuing causes a return. Actual cautery and citrate of mercury are among lines of treatment.

Dr. Hadley: Leukoplakia should be looked on as a condition which will develop cancer. Many carcinomas developing over luetic areas are such cases as Dr. Cregor has mentioned. Cited a case. Excision with free margin is proper treatment.

Dr. Stern asked if many of the lesions designated as carcinomatous were syphilitic.

Dr. Cregor replied that many cases considered carcinomatous are not, but yield to antisyphilitic treatment—not to salvarsan, but rapidly and painlessly melt under potash.

Meeting adjourned.

Attendance sixty-seven.

Meeting of May 11, 1915

Dr. A. C. Kimberlin read a paper on "Some Points in the Physical Diagnosis of Pulmonary Tuberculosis."

Abstract: The physician is now expected to diagnose tuberculosis and not consumption. The latter emphasizes much earlier recognition of this great social scourge. The mistaken diagnosis of early pulmonary tuberculosis for stomach trouble, goiter, neurasthenia and enteroptosis was still altogether too common. Tuberculosis most frequently enters the system through the pulmonary tissue. Clinical tuberculosis manifests itself in the lymph glandular system, most often of the mediastinum. Pulmonary tuberculosis is a reinfection from this site, and involvement of the parenchyma of the lung. Frequently bespeaks an active or clinical tuberculosis, and shows itself by alterations in the density of the finer structures of the pulmonary tissue, from which point, by careful study and practice, can be recognized by physical signs. Called attention to the importance of the various anatomical regions, especially the axilla, upper substernal and apices, showing the importance of different positions the patient should occupy during examination. One should remember that the pulmonary viscera occupying the thorax gives off pure sounds. That the chest manifestations or the greatest sympathetic sounds, and the real art of physical diagnosis consists in exaggerating the former and minimizing the latter. Auscultation of the voice is only reliable. When dealing with a whisper in auscultation or percussion one should keep in mind the upper and lower thoracic area. In the former heavy pressure with the stethoscope or percussion stroke will prove misleading, while in the latter just the opposite. By careful attention and study to the acoustics of the normal chest one can become able to make a thoroughly accurate, early physical diagnosis of pulmonary tuberculosis.

DISCUSSION

Dr. Wynn: The essayist teaches us to do the things nearest us. Tuberculosis is the most prevalent disease and we must give it more attention. The paper teaches us to get at the bottom of things. Take more time, and slight no case in making a diagnosis. We must train ourselves to do more careful work.

Dr. Henry: In the diagnosis of pulmonary tuberculosis there are various hobbys, namely Roentgen ray, palpation, history, tuberculin and others, but there must be no hobby. We should do everything in our power to make a diagnosis. Examine sputum one or a dozen times, take afternoon temperature several times, make several physical examinations, properly interpret a tuberculin test, pay attention to a full history, and use the Roentgen ray. With all available measures used, we sometimes fall down on a diagnosis. "Too late" is written on too many records.

Dr. Beeler: The improvement in apparatus and technic enabling the production of the soft tissue roentgenogram is what makes Roentgen-ray diagnosis of early tuberculous chest lesions possible. The experienced eye is one of the things that is also necessary and the man who has not seen and studied numbers of stereoptic chest plates is prone to find things on his plates that are not there and overlook some of the important shadows. The plates are studied as follows: (1) Bones, spine and relations of ribs, cartilages as to calcification. (2) Muscles, pectoral, diaphragm, heart, aorta and vessels. (3) Lungs heavy hilus, trachea and its trunks, and beyond the trunks the *fine linear markings. It is in these we find the most characteristic tuberculous changes.* In studying plates of tuberculous cases one notices four important changes from normal. One, large brilliant areas of increased density probably lesions of the glands. These are only of importance accompanied by increased density of the hilus and heavy trunks, suggestive of mediastinitis. Second, thickened trunks traced to periphery, increased in density and breadth with sometimes a studded course. They become interwoven, mesh-like. In advanced cases have cavity formation. Third, pleurisy adhesion at apices, adhesion of diaphragm and interlobar region. Hilus tuberculosis is secondary to focus in lung. Fourth, pleurisy with effusion. Advantages of Roentgen ray: (1) a negative Roentgen diagnosis is as valuable, perhaps more conclusive than a positive; (2) Roentgen rays exhibit the deep central region of the lungs to which percussion cannot reach, most frequently a far wider extent of the lesions than physical examination had indicated, gives cause for astonishment. Small foci, deep-placed infiltrations, cavities and changes are brought to light and may be exactly estimated.

Dr. Emerson: Nasal passages are often a stumbling block. Râles are misleading. There is often less expansion in a given region which can be explained by a protective reflex. The Roentgen ray shows things that are too deep for us to find. For instance, a central pneumonia gives few or no physical signs. Americans are lax in diagnosis because there are so few posts. In German clinics they check up. Roentgen ray is a check and makes us work harder.

Dr. Dodds: It is our duty to give everything in our power to make a proper diagnosis. The medical profession is too lax in making an examination. Men of reputation work.

Dr. Bush asked what the cardiopleural murmur signified.

Dr. Kimberlin said adhesions.

Meeting adjourned.

Attendance ninety.

Meeting of May 18, 1915—Hotel Washington

Meeting called to order by the president.

Dr. Langdon read a paper on "The Cerebrospinal Fluid and Syphilis."

Abstract: The study of cerebrospinal fluid is of importance because of its close association with the central nervous system, whose intricate mechanism and complex functions are so comparatively inaccessible to experimental study. Also because of its diagnostic value in certain diseases and particularly in syphilis. And also because we know so comparatively little about this peculiar fluid. It more nearly

resembles tears and sweat than any other fluid in the body. Our knowledge of the spinal fluid, its functions and aberrations, has gradually become more definite since Quincke did the first lumbar puncture in 1891. This fluid is thought to be of dual source, being secreted principally in the ventricles with an accession in the form of effusion from the perivascular system of the brain. It is discharged into the subarachnoid space, circulates between the arachnoid and piamater, is absorbed by the arachnoidian villi and passed into the venous sinuses. With such an intimate relationship to the brain and meninges, it is evident that the pathologic conditions of these structures would have an influence on the spinal fluid and that certain changes in this fluid would then be of great value in the diagnosis of such pathologic conditions. The involvement of the nervous system has heretofore been considered as a late development in syphilis, but our ideas of necessity change, for cases are being reported which show that the nervous system may be attacked early in the secondary stage. This shows the necessity for an early examination of this fluid. Do not wait until evidence of cerebrospinal syphilis, tabes or paresis appears. The examination of the spinal fluid is of value because so many confirmative and even differential tests can be applied. We have intraspinal pressure, the cell count, the various globulin tests, the sugar reduction tests, the Wassermann reaction and the colloidal gold test. Lumbar puncture should be done with the patient lying on his side. The upright position is responsible for more of the disagreeable after effects than any other one thing, as it is apt to give a too sudden change in intracranial pressure. Lumbar puncture should be attempted in your office. The first examination of this fluid is the estimation of pressure, but the variations are so great that no conclusions have been reached as to their clinical relationship. The cell count must be made as soon as possible after the fluid is withdrawn. Of the many different methods, the Fuchs-Rosenthal method is in most general use at present. According to Kaplan from 8 to 15 cells per cubic millimeter is considered borderland; 15 to 60 cells, a pathologic increase; 60 to 250, a hyperlymphocytosis, and from 250 to 2,000, an acute meningitic count. In paresis the cell count rarely exceeds 100. If it does, the clinical symptoms are of such severity as to be diagnostic. In cerebrospinal syphilis of mild type the count will be around 100, but in the more severe types it will run on up to the acute meningitic count. In untreated tabes the count is moderate—15 to 60. Treated cases vary greatly according to the amount and efficiency of treatment. The demonstration of globulin in the spinal fluid is done in perhaps a dozen ways. Of the methods used, four are particularly delicate: the Nonne-Appelt, or phase one reaction; the Noguchi butyric acid test; the Ross-Jones method, and Lange colloidal gold test. The sugar reduction test is of little or no value in syphilis of the nervous system. The Wassermann reaction is positive in from 90 to 100 per cent. in cerebrospinal syphilis, tabes and paresis. To a certain extent this test is quantitative when made with spinal fluid as a positive reaction with different quantities of fluid indicates different pathologic conditions. One feature of the Wassermann test with cerebrospinal fluid is that no other disease than syphilis will give a positive reaction, as may occasionally happen with the blood serum. In conclusion, I will say there are great possibilities yet before us in the study of the cerebrospinal fluid. At present, if we make use of the things we do know, particularly the diagnostic reactions in syphilis of the nervous system, we will often help ourselves and our patients out of trouble.

Dr. T. C. Potter read a paper on "The Examination of the Spinal Fluid in Psychiatric Cases with Special Reference to the Colloidal Gold Tests."

Abstract: To-day the examination of the cerebrospinal fluid is essential in the study of most of the psychiatric cases. The difficulty of differentiating cerebrospinal syphilis and early paresis is well known and it was with the hope that the colloidal gold reaction of Lange would help us in this matter that the work, the report of which follows, was undertaken in June, 1914. Fourteen reports of similar studies were quoted in abstract, and the technic of the gold test given in detail, as well as an outline of the routine tests used on the spinal fluids reported.

Summary of the tabulated results:

Of seventy-eight cases diagnosed clinically as general paresis, sixty-one cases, or 78.2 per cent., gave a reaction in the paretic zone, that is, the first three to six tubes giving a characteristic water clear "5" reaction. Ten cases (12.8 per cent.), gave a curve which, while not as typical as the paretic curve, is very suggestive and should be included with the sixty-one cases, making seventy-one, or 91 per cent. The remaining seven cases (9 per cent.) gave curves in the luetic zone, that is, the first four to five tubes showing a precipitation which usually does not exceed a "4" reaction. Five, or 6.4 per cent., of the group (paresis), gave a persistently negative Wassermann reaction in the blood serum, with a strongly positive Wassermann reaction, increased proteins and cell count in the spinal fluid. The cases included in the 91 per cent. of positive findings with the colloidal gold all showed an increase in the globulins and an average cell count of 81.5 per c.mm. The spinal from thirty-two cases, 45.07 per cent., gave complete inhibition with .05 c.c.; nineteen cases, 26.7 per cent. with 1 c.c.; twelve cases, 16.9 per cent. with 2 c.c.; six cases, 8.4 per cent. with .4 c.c.; one case, 1.4 per cent. each with .6 and .8 c.c. Five of the fluids of typical paretics were drawn three to five hours after death. Of the fifteen cases diagnosed clinically as cerebrospinal syphilis, twelve cases, or 80 per cent., gave a reaction within the luetic or meningitic zone and one case was definitely in the paretic zone (possibly a case of paresis in remission). The two other cases both have a strongly positive Wassermann reaction in the blood serum and spinal fluid, with positive tests for globulins and a cell count of 142 and 14, respectively. In four of these cases, there is a well-marked "Verschiebung nach oben," a term introduced by Lange, indicating a reaction maximum in the higher dilutions. All of these cases gave a positive Wassermann reaction in the blood serum and twelve a positive Wassermann reaction in the spinal fluid with increased globulins and an average cell count of 90 per c.mm. The three cases with a negative Wassermann reaction in spinal fluid gave negative or weakly positive globulin tests and had an average cell count of 6 plus. Of four cases of tabes, two, or 50 per cent., gave a suggestive luetic curve. Of the twenty-nine miscellaneous cases whose spinal fluids were studied either on account of sug-

gestive physical findings or history, thirteen gave a negative Wassermann reaction in the blood serum and fluid; one a positive serum and spinal fluid reaction; one, a positive serum and a doubtfully positive reaction with .8 c.c. spinal fluid; the remaining fourteen, a positive Wassermann reaction in blood serum and negative reaction in the spinal fluid. Most of the gold reactions were too irregular to admit of any definite interpretation. In the majority of cases reported there is a marked agreement between the Wassermann reaction, the globulin reaction and the Lange test, which leads us to agree with Moody in his statement that the result of the Wassermann reaction may be foretold from the gold test. It is also to be noted that of the seventy-eight cases diagnosed clinically as general paresis, 93.5 per cent. gave a positive Wassermann reaction in the blood serum and 96.1 per cent. gave a positive Wassermann reaction with .4 c.c. or less of spinal fluid.

CONCLUSIONS

1. It is absolutely essential that the directions laid down for the preparation of the reagent be followed exactly and that all glassware be absolutely clean and free from either acids or alkalies.

2. The Lange colloidal gold reaction is an aid in the diagnosis of general paresis, when used in conjunction with the results of the Wassermann reaction on the blood serum, and the Wassermann reaction, the cell count and protein estimation in the spinal fluids, as well as the careful study of the case clinically.

3. This test is of value in confirming a clinical diagnosis by examination of the spinal fluid three to five hours after death.

DISCUSSION

Dr. Humes wished to speak entirely from clinical standpoint, expressing, too, a profound respect for those competent to do laboratory work as the essayists demonstrated. He considered no neurologic examination complete without careful serologic examination of both blood and spinal fluid of eye background. The blood Wassermann is so easily influenced by general toxic conditions other than lues as to make its reaction much less dependable than the spinal fluid. There is no appreciable danger attending spinal puncture under regular precautions unless gross brain lesions are evident.

Dr. Erdman: Schaudin is responsible for the immense amount of laboratory work done along these lines. Dr. Erdman gave a history of the various reactions. These tests have broad application in diagnosis. We owe Dr. Potter a vote of thanks for the enormous amount of work done in preparation of this paper. The anomalies in glucose determination are sources of error. The work done by various men should be uniform. Asked about the Wassermann in tabes and cerebrospinal syphilis.

Dr. Bahr: The laboratory tests aid greatly in differential diagnosis in doubtful cases of depressive insanity and paresis. Reported cases.

Dr. Sterne reported a case similar to that spoken of by Dr. Bahr. The man was forgetful and could not keep up current coordinate thought. The clinical examination was negative; both blood and spinal fluid gave double positive Wassermann. Prognosis was bad. Prefers to have the clinical findings and the laboratory findings correspond. Syphilis attacks the nervous system earlier than many people think. Severe headaches early in syphilis indicate nerve affection. The secondary symptoms are the symptoms of toxemia, such as may occur in other diseases. Early and persistent treatment should be given to avoid the nerve affections.

Dr. Neu considered examination of the cerebrospinal fluid imperative in connection with clinical examination. Results of examinations are valuable only when the findings are compared. Reported special work done at the City Hospital which could not be finished before his term of service expired.

Dr. Wagner expressed his appreciation of Dr. Langdon's work. He reported work done in one or two instances.

Dr. Alburger insisted that laboratory findings should not be regarded as absolute, as many sources of error were possible. Laboratory men should get together and adopt uniform technic and standards.

Dr. Carter reported further on the cases of Dr. Neu at the City Hospital. Treatment intraspinally was given somewhat arbitrarily with periods of treatments alternating with intervals of rest. The nomenclature should be more uniform.

Dr. Sowder said that he had become confused in an effort to coordinate local laboratory findings. He spoke of a patient who had had tests made in various places with varying results.

Dr. Gregor regards the lack of thorough clinical examination and too great a dependence on laboratory findings a fault of the general practitioner. How many physicians examine the papillae on the tongue, note glandular involvement, etc.? Whether the Wassermann is negative or positive the treatment should be early and diligent. In the clinic at Vienna the plan of treatment is that the amount of mercury depends on the weight of the person. He also gave plan for the iodids and salvarsan. Syphilis is a tissue disease and this includes the tissues of the nervous system as well.

Dr. Langdon closed the discussion by explaining the relative value of laboratory tests on the spinal fluid.

Dr. Potter in closing said the laboratory should be regarded only as an aid. A negative Wassermann may mean anything. The theory that the spirochetes are imbedded in the tissues and not reached by treatment was mentioned.

Meeting adjourned.

Attendance sixty-one.

Meeting of May 25, 1915

Dr. Arthur Walters read a paper on "Some Recent Investigations of the Ipecac Alkaloids."

Abstract: Description of ipecac root and origin of plant. History of its introduction into Europe. Isolation of the ipecac alkaloids emetin, cephelin and psychotrin by Paul and Cownley in 1894. All pharmacologic work previous to this date was carried out with impure alkaloids. The earliest pharmacologic work was done by Magendie and Pelletier in 1817. Since then many investigators have studied the action of emetin, less attention having been paid to cephelin. The earlier work proved emetin to be emetic and toxic in small doses. It was shown to be a depressor of the central nervous system and to have a direct paralyzing effect on the heart. Empiric-

ally it has been known for a long time that ipecac is curative in amebic dysentery. Vedder, in 1911, however, was the first to show experimentally that emetin has an amebicidal action. In the laboratory of Eli Lilly & Company the writer, with the assistance of Mr. Eckler and Dr. Baker, has shown that emetin and cephelin differ mainly in the quality of their action. Cephelin is twice as emetic and one and a half times as toxic as emetin. On the other hand they have shown that cephelin is also amebicidal, possessing about one half the amebicidal strength of emetin. In working with cultivated water amebas dilute solutions of these alkaloids kill the motile organisms in a few minutes but the encysted forms are resistant for hours and under suitable conditions will later develop into the active form. Endamebas isolated from pyorrheal lesions are more resistant than water amebas to the ipecac alkaloids. These endamebas, however, are killed by stronger solutions and will disappear from the pyorrheal lesions within a few days when the patient is given the ipecac alkaloids either orally or hypodermatically.

Dr. Marshall reported a case of intraocular sarcoma.

Abstract: Patient, Mr. M., aged 57, with negative history. First seen Feb. 27, 1914. Vision, left eye, 20/20; right eye, nil, except when head was slightly rotated when it was 20/40. There was no pain and discomfort. Pupil normal and active. Tension not disturbed. Ophthalmoscopic examination showed round knob-like prominence on nasal side about half the size of cherry stone. Diagnosis: intraocular sarcoma. Immediate enucleation was advised. Patient immediately took up science and was not seen again until May 4, when his glaucomatous symptoms had begun. Patient readily consented to an enucleation. Microscope examination showed a melanotic sarcoma with a diameter of 12 mm.

DISCUSSION

Dr. Baker: Ipecac is now being used in a large number of disorders and its proper place in therapeutics yet to be determined; much of its pharmacology is still to be worked out; one of its most important uses at the present is as an amebicide. Both emetin and cephelin are amebicidal but emetin is the more so. Experiments made with the water ameba grown on artificial media show emetin and cephelin in a 1 to 50,000 solution destroy the motile amebas in a few minutes while the encysted ones are not destroyed after a two hours' exposure to the same solutions. In greater dilutions there appears to be a qualitative difference in the manner in which the amebas disintegrate this being quicker and more complete with emetin than with cephelin. The pathogenic amebas have not as yet been grown on artificial media.

Dr. Kiser: Dr. Walters' paper is timely. Emetin is at present a much discussed drug and is being recommended in the treatment of many ailments. There is little doubt but that in properly selected cases it offers much. On the other hand it is to be hoped that we do not look on it as a panacea and that its use will be restricted to suitable cases. My personal experience in the treatment of a limited number of cases of pyorrhea has been very satisfactory. In some instances the effect has been spectacular as the disappearance of a diphtheritic membrane after the injection of antitoxin. I have had no opportunity to try it in true dysentery, but in one or two cases of diarrhea it has proved unsatisfactory, rather aggravating than relieving the condition. There is little doubt when explained and properly established we will find it to be the most valuable drug.

Dr. Kitchen mentioned ipecac as a therapeutic agent in treating asthma, and cited several cases in which he had seen great improvement.

Dr. Hughes and Dr. Sharp said Dr. Marshall's case was an exceedingly rare one.

Meeting adjourned.

Attendance sixty-one.

Alfred Henry, Secretary.

MUNCIE ACADEMY OF MEDICINE

Meeting of April 30, 1915

The regular meeting of Muncie Academy of Medicine was held in Y. M. C. A. building Friday evening, April 30, and was called to order at 8:15 by President O. E. Spurgeon.

Dr. H. D. Fair read an interesting case report: a woman of 27 had an abscess starting between the layers of the broad ligament and burrowing down till it drained at a point on the labia majora near the fourchet.

Dr. O. E. Spurgeon read a paper on "The Etiology and Pathology of Coma," saying in part: The etiology of coma is the etiology of the disease producing the coma. Coma is a symptom, evidently the result of profound disturbances of normal function of nerve cells of brain. In vast majority of adults cause will be found to be (1) a brain disease, injury or defect; (2) an infection; (3) a poison; (4) a form of cardiac insufficiency; yet we do not clearly understand just how these causative factors act. Let us consider some of the antecedent causes. Mechanical injuries to brain probably produce coma by disturbing relation of nerve cells composing brain. Some authors, Martin Fischer for instance, contend that there is a great similarity in pathology of all varieties of coma. On the other hand, Tyson warns us that diabetic coma must not be confounded with other forms which may occur in diabetes, as true apoplexy and uremia. Professor Saunders and others attribute coma of diabetes to carbonic acid poisoning due to fat embolism of pulmonary vessels. The terminal stage of many infectious diseases is accompanied by coma. Oxidation in the brain being incomplete, acid forms resulting in edema, the edema finally producing coma, Nature's method of providing a painless death. To recapitulate, coma is the result of suspended function of the part of the brain cells which control consciousness, due to one of three causes: first, mechanical injury; second, chemical injuries, such as lead poisoning, diabetes, etc.; third, anesthesia of nerve cells due to toxic substances with but little injury to brain substance, as in chloroform anesthesia.

Dr. G. R. Andrews read a paper on "The Diagnosis and Treatment of Coma," emphasizing the following points: Coma is a term which should only be applied to that condition where perception and volition are wholly suspended and the patient cannot be roused. In coma vigil the subject lies with his eyes open, utterly unconscious to his surroundings,

and usually delirious. In making a diagnosis, first obtain as thorough a history as possible. Examine head for injury and face and extremities for paralysis; skin for surface heat or moisture and eyes and lids for pupillary condition and lid resistance. In coma due to opiates respiration is slow, pupils equal and contracted, skin dry and warm, pulse slow and full. In true alcoholic coma pulse and respiration are rapid, skin cool and moist and temperature subnormal. In apoplexy coma is sudden and profound. Respiration slow, sterterous and may be of the Cheyne-Stokes type; pupils dilated, often unequal and do not react to light. Facial asymmetry common. In coma due to embolism or thrombosis the onset is generally more gradual. In uremic coma recognition of certain peculiar phenomena are of great value. Odor of breath, and examination of a catheter specimen of urine may point the way. Uremic coma sometimes follows violent muscular exerttion. Diabetic coma is not always easily recognized. Treatment of coma is essentially the treatment of conditions causing it whether they be traumatic or morbid processes. Sodium bicarbonate is strongly indicated either by mouth or rectum. If blood pressure be high, bleeding may afford much relief. Bowels should be promptly emptied by enema.

Adjourned.

Meeting of May 14, 1915

Dr. W. J. Molloy spoke for a few minutes on general subject of "Smallpox," giving advice as to care of patient, protection of community and as to necessity of vaccination if we expect to ever be a country free from this loathsome disease. Dr. Molloy has been deputy and actual health officer for a number of years, and speaks from a broad experience. The unvaccinated serve as fertile soil for propagation of smallpox. The disease is contagious at all stages. Children vaccinated at 1 year of age and then again at 12 may be considered immune. The mild or borderline cases prove a serious menace for they are so frequently unrecognized and uncontrolled, thereby spreading the scourge broadcast. Many who refuse to be vaccinated expect protection from authorities. Some states are allowing special privileges, in quarantined territory, to those who have been vaccinated. The complications which may be due to smallpox are, suppuration, edema of larynx, bronchitis, bronchopneumonia, pleurisy, parotitis angina and otitis media.

Dr. F. W. Dunn read a paper on "The Early Diagnosis of Smallpox," saying in part: Smallpox is to be differentiated from measles, scarlet fever, cerebrospinal meningitis, typhus fever and varicella. Until shotty papules form it is often difficult to recognize the nature of the rash in variola, particularly when we have no suspicion of smallpox. Severe initial chill followed by fever, headache, vomiting and pain in back are symptoms which should put physician on guard. In measles there is the coryza and cough; in scarlet fever the hyperemia and sore throat; in smallpox there is a splenocytosis. Hemorrhagic form of smallpox may be mistaken for purpuric spots of cerebrospinal fever. The prodromal stage in smallpox is four days; in chickenpox twenty-four hours. The onset in smallpox is sudden, in chickenpox gradnal. In the latter the eruption is papular, seldom umbilicated and always collapsible, occurs in irregular and successive crops, while that of smallpox starting usually on the forehead scatters over the trunk in the same stage of evolution. Pustular syphilides and accidental croton oil eruption have been mistaken for smallpox.

The papers were ably discussed by Drs. D. M. Green, Mix, Trent, J. C. Quick, Spurgeon, Wadsworth and Fair. The latter contended that an extreme reaction following vaccination was likely to mean an infection rather than an extremely effective "take."

Adjourned.

Meeting of May 21, 1915

Dr. D. M. Green read a paper on "Hyperchlorhydria," which means a disorder of the secretory function of the stomach that results in an overproduction of hydrochloric acid during period of digestion. Clinical symptoms must receive marked consideration both in diagnosis and treatment. Chief causes are, (1) mechanical or chemical irritation to mucous membrane of stomach; (2) pathology in or in close relation to stomach; (3) malposition of stomach; (4) reflex neuroses, and (5) personal idiosyncrasy. Symptoms usually begin one to three hours after eating. There may be a distressing sensation of heat, fulness or tingling, belchings with sour erructations, actual and severe pain or vomiting. Spells last from a few minutes to several hours or till medication or more food is ingested. Those in whom the nervous element is prominent respond less readily to treatment. Generally starches increase the symptoms, albumins or alkalies decrease. History usually reveals dietetic errors, bad cooking, and general disregard of nature's laws regarding intended use of stomach. Since what may produce an intense hyperchlorhydria in one individual may be borne by another with impunity, great care must be exercised in determination of exciting causes if we expect to accomplish much in way of treatment. Generally speaking, tobacco, alcohol, acids, spices, excess of sweets, extremes in hot or cold foods and drinks, special food known to produce discomfort, and hasty eating should be forbidden. Conditions productive of overwork, mental anxiety or general unrest should be avoided. Excess of hydrochloric acid may be bound by administration of albuminous food or neutralized by alkalies, the most important of which are sodium bicarbonate or carbonate and magnesium oxid, the latter being preferable. Lactone buttermilk is of value. Free elimination and temperance in all things are essential.

The other side of the question. "Hypochlorhydria and Achlerhydria," was presented by Dr. R. E. Cole who said: These terms refer to different degrees of same condition, namely, where peptic glands fail to secrete a normal supply of hydrochloric acid or none at all. The lack of hydrochloric acid in gastric juice may be due to disease of secreting glands or to disease of nerves supplying these glands. In acute gastritis secretion may be arrested because of extension of inflammatory processes. The peptic glands may be destroyed by carcinoma, gastric dilatation, valvular disease of heart, cirrhosis of liver, pulmonary tuberculosis, chronic bronchitis, leukemias and sometimes diabetes. Functionally the acid may be lessened by hepatic colic, sad emotions, mental shock and overexertion. Absence of normal hydrochloric acid favors fermentation and putrefaction early in the process of digestion, and food is retained longer in stomach. Constipation is favored by lack of acid stimulation to peristalsis. Lack of hydrochloric acid

should be met by administration of that acid, and its secretion stimulated by a bitter tonic and regulation of diet.

Adjourned. H. D. Fair, Secretary.

DELAWARE COUNTY

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. building Friday evening, May 7, and was called to order by past president Dr. U. G. Poland.

Dr. George R. Andrews spoke on "The Open Treatment of Fractures," saying: The patient is an individual; his surroundings and the doctor with his skill and equipment must be considered when about to operate. (Dr. Andrews here quoted an abstract from report of Council of the British Medical Association made in 1911, dealing with results in both open and closed methods of treatment of fractures.) The principal object in open treatment is complete reduction, and it is often surprising to find how easily a fracture may be held in place after careful adjustment under sight. Fractures of patella, olecranon, head of radius, carpal, tarsal, condyles and tuberosities should generally be treated by open method as should also dislocation of head of any of long bones when soft parts become interposed or when there is evidence of nerve pressure or hemorrhage from a large vessel, and in all cases where infection has occurred in fractured area. The first question is, What is proper time to operate? Sometime during second week is generally considered time of choice. The objections to immediate operation is that because of trauma resistance is lowered and accidental infection is favored. Sterilization of field is of great importance. The incision should be located so as to do least harm to intervening structures and long enough to give free access for manipulation. Do as little handling as possible; small or loose fragments should be removed and a suitable retaining device accurately applied. I place a piece of rubber dam in ends of wound before parts are closed. This allows a seepage of fluids which is often considerable. I permit this to remain about one week. A faulty technic, which would cause no serious consequence in abdomen, applied to bone surgery might result fatally. We still have more remote possibilities which are of no mean importance, such as gastro-intestinal, genito-urinary and respiratory tract infections both as a surface and blood current source.

Dr. J. C. Quick exhibited a Roentgen-ray photograph showing a perfect result from the repair of an intracapsular fracture of shoulder, by a nickel-plated screw. The screw is still in place after an elapse of nearly a year.

Dr. C. M. Mix thinks that metal plates frequently retard union. He often uses them but finds them sometimes a source of worry to both physician and patient.

Dr. F. G. Jackson called attention to seriousness of fractures involving wrist and ankle. The old saying, "a sprain is worse than a fracture," probably had its origin in the fact that many so-called sprains were really unrecognized fractures, therefore did not receive proper treatment. Roentgen-ray examination should be made in every serious injury near carpal or tarsal joints.

Adjourned. H. D. Fair, Secretary.

ELKHART COUNTY MEDICAL ASSOCIATION

Meeting of May 6, 1915

Called to order by President Haywood at 8 p. m. in Public Library, Elkhart. Minutes of April meeting read and approved. Announcement of following appointees as members of Committee on Red Cross Medical Work: S. C. Wagner, Wakarusa; A. C. Yoder and G. W. Kirby, Goshen; C. W. Haywood, chairman, and J. A. Work, Jr., secretary, Elkhart.

Paper, "The Myocardium in Heart Affections," I. J. Becknell, Goshen. Heart muscle must be carefully studied in every heart case. Compensatory ability of myocardium is called into question in every serious disease, especially in endocarditis and in arteriosclerosis. A serious lack in our diagnostic armamentarium is an apparatus which will accurately tell clinician the exact condition of myocardium in any given case.

Virchow describes a parenchymatous and an interstitial myocarditis. First named condition results from ravages of toxins of acute infections. The microscope shows fatty degeneration of heart muscle fibers. Interstitial form is a chronic disease and results from long continued absorption of toxins and inadequate elimination of waste products from body.

Symptoms of myocardial degeneration—progressive weakness more noticeable on exertion, palpitation, shortness of breath, leg weariness, mental tire, tachycardia, diminished excretion of urine, edema of lower extremities, lowered blood pressure, intermittent pulse and increased area of heart dulness.

Every practitioner has cases which surprise him in their recovery from apparently serious heart involvement. Cases showing valvular lesions with myocardial degeneration should be treated by rest in bed. Diet plain and nourishing consisting mainly of sweet milk and buttermilk. A heart, acting badly, is embarrassed by pressure of a stomach distended with food and gas. Free elimination by bowels and kidneys.

Mackenzie on value of strychnin: "I have carefully sought for its special effect on the heart and have found none. The evidence that can show a drug to possess the property of exciting the sluggish, and of soothing the excited, of raising low pressure and relieving high, speaks more for unreasoning faith in drug than for beneficial properties of the drug itself."

Newburg, Massachusetts General Hospital: "Clinicians have not been able to demonstrate that strychnin increases the output from heart; they have not shown that broken cardiac compensation can be relieved by strychnin."

Digitalis and its alkaloids must continue to hold first place as heart tonics. It slows the heart and increases its force at the same time. It is also a diuretic. Digitalis contra-indicated in a case showing an advanced fatty heart. No cardiac stimulant is indicated unless rest in bed with free elimination fails to bring about myocardial compensation. The value of vascular depressants is not sufficiently recognized. They act by relaxing peripheral arterioles and by lowering blood pressure. Amyl nitrite, sodium nitrite, and nitroglycerin, the latter in 1 per cent. solution.

Concluding, Dr. Becknell made the observation that "in most cases it is possible to obtain bodily rest for

our patients, but it is often more difficult to secure for them mental repose, which may depend on temperament or circumstances beyond our control. Many a restless, irritable patient robs himself of his chance to live."

DISCUSSION

S. T. Miller, Elkhart: Finds difficulty in getting heart cases to go to bed.

E. D. Stuckman, New Paris: Emphasized rest and adequate elimination in myocardial difficulties.

G. W. Kirby, Goshen: Cases are usually late in consulting a physician. Rest is main consideration. Related unsatisfactory experiences in use of digitalis. Tablets containing digitalis inert.

M. K. Kreider, Goshen: Use of digitalis overdone. In case of incompensated heart, Dr. Kreider promptly finds the seventh cervical spinous process, percusses it diligently and obtains immediate relief for patient. The irregularity of heart beat clears up and remains cured. Also employs orificial dilatation with unfailing and undoubted success.

C. F. Fleming, Elkhart: Muscle weakness in other parts of body found in cases of myocardial incompensation. Pericardial and endocardial lesions are very frequently found associated with myocarditis. Mental and nerve rest is essential part of rest treatment. Case cited—woman confined to hospital three or four years with myocardial weakness accompanying rheumatism. She found a good eliminant for alimentary tract and stoutly maintains that her improvement is due to that remedy.

B. F. Teters, Middlebury: Case reported—woman, myocarditis, extreme dyspnea, near death. Anasarcin tablets and magnesium sulphate seemed to effect a cure. Study of myocardium main feature of study of diseased hearts. Maintain compensation. Case reported—gentleman, 50 years old, severe attack angina pectoris, very weak for two or three days but improved. On third day drove into country several miles, ate a hearty supper, acute dilatation of heart and immediate death. Absolute rest was indicated in this case. Life might have been prolonged for years.

S. O. Barwick, Elkhart: Myocarditis almost always associated with other pathology. Emphasized importance of free elimination of nitrogenous end products by kidneys. Urine examination indicated in every heart case. Case cited—man, edema of lower extremities, extending up to trunk, high blood pressure, incompensated heart muscle. Patient responded to free elimination treatment.

J. C. Fleming, Elkhart: Asked about Schott treatment. Heart muscle cases should be recognized early. Examinations of heart are too cursory. Routine inspection, palpation, percussion, auscultation, and taking of blood pressure should be observed. Focal infection a factor in cause of heart and kidney lesions. Billings cited his own case. He had his gallbladder drained—three gallstones were found—and all his symptoms of myocardial incompensation cleared up. Never give an unfavorable prognosis—recovery of apparently bad cases not infrequent. Scarified the edemic skin on the legs in two cases. One lived two years and the other three years.

I. J. Beckwell, closing: Milk of magnesia valuable for effect on stomach and bowels. Schott treatment may be successful if administered in properly equipped sanitarium.

Motion made and carried that president appoint two committees to arrange for June picnic, one committee composed of members, and one of the wives of physicians. The following names were announced: Committee of Ladies—Mrs. G. W. Spohn, Elkhart, chairman; Mrs. E. M. Hoover, Elkhart; Mrs. I. W. Short, Elkhart; Mrs. W. B. Kreider, Goshen; Mrs. H. J. Defreese, Nappanee. Committee of Members—Dr. W. B. Page, chairman, Goshen; Dr. B. F. Kuhn, Elkhart; Dr. W. A. Price, Nappanee.

Adjourned.

Meeting of April 1, 1915

Call to order at 8:30 by President Haywood in K. of P. Rooms, Goshen. Minutes of March session read and approved. Announcement of Thirteenth District Medical Association meeting at Rochester, April 28, and of Anti-Tuberculosis meeting at Public Library, Goshen, April 5.

Address, "Local Anesthesia," J. H. Jacobson, Toledo, Ohio. Hypodermic needle invented by Edinburgh man in 1853. Cocain first used in 1884. Adrenalin was found to intensify the anesthesia when used with Schleich's solution. Use of cocain has been limited to minor surgery.

Solution now used in both major and minor surgery contains 3 drops of 1:1,000 adrenalin to each ounce of 0.5 of 1 per cent. novocain. Wait ten minutes before making incision. The most that is felt by patient is a pulling or tugging sensation. Jacobson uses 200 c.c. of this solution during one operation with no bad results. Allay nervousness by preliminary morphin and scopolamin injection. Early learn to differentiate the various kinds of tissues to be incised. Needles 3½ inches long. Jacobson devised special syringe. Injections made as tissues are reached.

Statistics of mortality under general anesthesia 1 death in 6,000 at Mayo Clinic, and 1 death in 5,000, Bevan. The actual death rate from general anesthesia is greater than that given in text-books.

Of all operations in 1913 at Heidelberg, 11.4 per cent. were done under local anesthesia. Percentage of local anesthesia becoming larger all the time. Local is frequently supplemented by ether Rausch. Lumbar and sacral anesthesia also increasing in use. Infiltration with Schleich solution always of value in minor operations.

Two methods, (1) directly injecting part to be incised or (2) infiltrating tissues surrounding area to be operated on. This latter is the one most frequently employed by Jacobson. Anesthetic barrier around operative area. Details of blocking nerves may be obtained from works of Schleich and others.

It is well known from traditionary evidence that without an anesthetic pain is most severe during the skin incision. Bone receives nerve supply from periostcal nerves. Joint capsules and ligamentary sheaths are particularly sensitive to pain.

The relative degree of sensitiveness of different abdominal organs has been described. Amputation of appendix itself is painless although ligating the meso-appendix is accompanied by pain. Thyroid gland relatively insensitive. Temperament, disposition, race, and other factors have much to do with patient's reaction to pain. For extraction of teeth, the infradental branch of the trifacial at the infradental foramen is injected. Jacobson recently made two amputations of entire breast for carcinoma under

local anesthesia. Kocher does thy oidectomy as a routine under local anesthesia Method of choice for strangulated hernia in aged. Used in gastrostomy, cystostomy, drainage of gall bladder, and appendectomy.

Braun of Twickau has elaborated a method of injecting nerves on either side of spinal column. Local used in suprapubic or perineal prostatectomy. Varicocele and hydrocele should always be operated on under local anesthesia.

Brachial plexus may be injected where it crosses first rib. Following this there is complete sensory and motor paralysis of arm in five to ten minutes.

Dr. Jacobson lists a total of ninety-five hernia operations on eighty-one patients as follows:

Radical cure of inguinal hernia	65
Radical cure of femoral hernia	13
Strangulated femoral hernia	5
Strangulated inguinal hernia with radical cure	7
In arcerated umbilical hernia	2
Umbilical hernia	1
Strangulated umbilical hernia	1
I cisional hernia	1
	95

DISCUSSION

B. F. Kuhn, Elkhart: Has frequently started operation under local anesthesia and followed up with general anesthesia. Precedes all with morphin and scopolamin to eliminate fear.

A. C. Yoder, Goshen: Details of method of blocking off nerves in inguinal hernia?

C. F. Fleming, Elkhart: Is preliminary injection of morphin and scopolamin a routine procedure and is it given in children? Is local anesthesia more difficult of use in extremely fat patients and is there more danger of infection? Relative toxicity of eucain?

H. K. Lemon, Goshen: Has rejected use of quinin and urea on account of necrosis and delayed healing. Related experience in removal of foreign bodies from sole of foot.

I. W. Short, Elkhart: Used quinin and urea in circumcision with subsequent ulceration at orifice.

G. W. Kirby, Goshen: Operated successfully on inguinal hernia under scopolamin and morphin and alopin locally, three weeks ago.

M. K. Krcider, Goshen: Has used eucain, cocain, and novocain. Crile uses quinin and urea with no necrosis.

C. W. Frink, Elkhart: Interested in Dr. Jacobson's statement concerning nitrous oxid.

J. A. Snapp, Goshen: Has used alopin for several years. Thinks he has had very good results. Some sloughing in circumcision.

L. A. Elliott, Elkhart: As good results with 0.5 of 1 per cent. novocain as with 2 per cent.?

I. J. Becknell, Goshen: Has used constriction instead of injection. Has operated successfully two rectoceles with quinin and urea injections.

A. A. Norris, Elkhart: Has used cocain, novocain, and quinin and urea in rectal operations. Has removed Lane plates, operated on internal and external hemorrhoids, varicocele and rectocele under local anesthesia.

G. W. Spohn, Elkhart: More danger in the anesthetic in nose and throat work than in the operation. Technic in herniotomy? Case cited of fatal result in man 72 years of age. Objection to combining quinin with novocain. Uses local anesthesia four or five times a day. Effect of local anesthetic on blood pressure? How avoid syncope? Kendirgy of Paris did herniotomy under local anesthesia using to make solution tablets of American manufacture. He used a vast amount of novocain during one operation. Spohn was alarmed. A 2-dram syringeful was injected ten times with no ill results.

S. T. Miller, Elkhart: Could not quinin and urea be used to inject muscles preceding neosalvarsan injection?

H. W. Eby, Goshen: Has noted occurrence of syncope in certain cases where novocain and adrenalin were used.

J. H. Jacobson, closing: For treatment of fractures uses gas anesthesia near Roentgen-ray machine. Injects both superficial and deep for reducing Colles'. Injects a circle around arm, then another, and then deep. Objections to quinin and urea: (1) action uncertain, (2) sloughing. Advantage: anesthesia last four or five days. The ideal is an anesthesia which will last four or five days. Crile says the parietal peritoneum is the sensitive part of the abdominal cavity. Ten c.c. is the usual quantity of 0.5 per cent. novocain used.

By constricting the arterioles, adrenalin limits absorption. As smaller quantities of adrenalin came to be used, the danger of secondary hemorrhage lessened. Made up with isotonic salt solution. Uses Farbwerke-Hoechst Co., crystals and tablet. Boil salt solution three minutes and add tablet. Use fresh solution every time. Distilled water injected under pressure will give anesthesia. Fraenkel used 0.1 per cent. solution novocain for a long time by mistake—meant to use 1 per cent. solution—but got good anesthesia. Does not try to use local anesthesia in children.

Dr. Jacobson supplemented his address and discussion by a moving-picture demonstration of his operative procedures under local anesthesia. This was given at the Lyric theater, Goshen, subsequent to adjournment.

James A. Work, Jr., Secretary.

HANCOCK COUNTY

Hancock County Medical Society met in regular session at Columbia Hotel, Greenfield, at 7:30 p. m., May 13, 1915.

After supper meeting was called to order by Vice-President E. R. Sisson. Minutes of previous meeting read and approved.

Memorial Committee on death of our president, Dr. Paul E. Trees, reported and the report was unanimously adopted.

Board of Censors reported favorably on applications of Drs. J. B. Young of Cumberland, and S. D. Clayton of Maxwell, and they were unanimously elected to membership.

Communications read and disposed of.

Board of Censors instructed to investigate conditions relative to matters pertaining to agreement of physicians of this county.

Dr. C. F. Neu of Indianapolis, gave a very interesting and instructive address on "Pain." The address was generally discussed.

Adjourned. Joseph L. Allen, Secretary.

JENNINGS COUNTY

Jennings County Medical Society met in regular session at the City Hall, North Vernon, Wednesday, April 28, with eleven members present.

Resolutions of sympathy were adopted and secretary was instructed to mail a copy to Dr. S. D. Adams, our oldest member, who is very ill.

Dr. Stemm reported five cases of pruritis pudendi that have come under his observation recently, all occurring in women over 45. Only one patient, aged 55, has diabetes. Two had urethral caruncle which he removed. At loss to explain cause.

Dr. McAuliffe reported a case of paresis resulting from syphilis. He called attention to the fact that physicians practicing in small communities were prone to overlook this disease and to impress on the patients suffering from it the dire necessity of careful treatment.

A discussion of the recent fight in the legislature by chiropractors for divine rights resulted in the society adopting the following resolutions which were offered by Dr. Richardson:

WHEREAS, The Committee on Public Policy and Legislation of the Indiana Medical Association, is at geat expense of time and money in attending sessions of the legislature, said attendance being necessary by proposed legislation detrimental to the high standard of medical education, and

WHEREAS, The same menace recurs at each succeeding session of the legislature with increasing chances of success, and

WHEREAS, The medical profession of the state as represented by its proper committee, is not properly financed to meet the expenses incident to opposing the nefarious and powerful organization of quacks and charlatans seeking the legal right to prey on the afflicted and sick of this state; therefore, be it

Resolved, By the Jennings County Medical Society, in regular session, a majority of the members being present, that it is the sense of this Society that the sum of one dollar per annum, in addition to the present dues, should be collected from each member of a county medical society of the State Association. The money thus collected to be placed to the credit of, and for the exclusive use of the Legislative Committee in fighting measures before the legislature detrimental to scientific medical education; be it further

Resolved, That these resolutions be spread on the minutes of this Society, and a copy be sent to the editor of THE JOURNAL of the Indiana State Medical Association for publication.

Adjourned. JOHN H. GREEN, Secretary

MONTGOMERY COUNTY

Montgomery County Medical Society met in regular session May 18. Dr. P. J. Barcus gave a report of twelve cases of cesarean section.

The society voted to invite the District Society to meet at Crawfordsville in 1916.

The president appointed a committee of three, Drs. N. A. Carey, P. J. Barcus and H. B. Williams, together with the officers of the society, as a Red Cross Committee to act in conjunction with the National Society at Washington, D. C.

On motion the president appointed a committee, Drs. George T. Williams, N. A. Carey and H. E. Green, to draft a county fee bill.

Committee was directed to arrange for a banquet and speakers for next regular session, June 15, at which time Dr. H. B. Williams will read a paper on "Summer Diarrhea."

Adjourned. THOMAS L. COOKSEY, Secretary.

SPENCER COUNTY

Spencer County Medical Society convened in regular session at Richland City.

After the regular order of business was dispensed with, Dr. C. W. Bradley read a paper on "Management of Child During First Six Months." He said in part: First oil the baby, and do not wash; always have a good blanket to keep child covered; only use such band as is necessary to keep dressing in place on cord; wash mouth and eyes with boric acid solution; room should be well ventilated; baby should be fed regularly—mother's breast always best; excitement is harmful; at three months place child on commode each morning and if no bowel movement use small injection of water, and soon it will learn to respond to nature; child needs to be kept warm and do not give much medicine.

Dr. G. B. DeTar stated that at birth the liver and arteries are large, muscles weak, hence the cause of so much constipation of infants—the muscles of the abdomen not strong enough to assist intestines in throwing off fecal matter. Appetite ravenous, digestion rapid, stomach small, which makes necessary frequent feeding.

Dr. Weiss read a paper on "Adenoids and Tonsils," and mentioned as symptoms, mouth breathing, deformed face, snoring in sleep, long-drawn face, etc. This line of surgery is followed more than any other. To examine child, have nurse hold child, confine hands, stand behind child, steady head with one hand and with index finger of other hand examine child. Operation should be done under general anesthesia. On repeated attacks of tonsillitis it is best to operate. Rheumatism often follows tonsillitis. Dr. D. V. McClory stated that operation is not without its danger and must not be looked at in a light manner. To do a bloodless operation, use adrenalin with cocaine.

Dr. A. B. Thompson was a visiting physician at this meeting.

Society adjourned to meet at Lincoln City June 15.

Doctors and their wives were invited to an adjoining room where ice cream, cake, and fruit punch were served. H. Q. WHITE, Secretary.

VIGO COUNTY

Meeting of April 6 was held at Elk's Club from 12:30 to 2 and was well attended. Luncheon was served and everyone seemed to enjoy this social feature of the society. It is now part of the regular program for each month. It evidently keeps alive more interest and encourages better attendance.

April 13 a very interesting paper was presented by Dr. Jett, entitled "Some Unusual Cases Coming to Necropsy." There were 14 cases reported out of 700 necropsies. The first case was one of sarcoma completely encapsulating a *normal* left kidney. The growth and kidney weighed 10 pounds. A correct diagnosis was not made. The second was a suppurating ovarian cyst completely filling the abdomen.

Operation refused and tapping done. Two buckets full of pus were taken out the first time and one the second. No diagnosis. The third case was a bone plate in left pleural cavity larger than a man's hand and resembled a small scapula. This specimen was exhibited to the society last year and history of case given. Diagnosis of pulmonary tuberculosis. Fourth case was normal kidney in male laying in position of uterus in female. Ureter 2½ inches long showing it to have always been in that position. The fifth was one of stony pericarditis. Heart encased in bony plate. Tubercular pericarditis. Various diagnoses had been made, but none correct. This specimen has been exhibited before the society. In the sixth case left kidney completely destroyed by stone in uterer at bladder. Kidney about the size of end of thumb. The other kidney was two and a half times its normal size on account of compensatory function. Seventh case, transposition of entire viscera of thoracic and abdominal cavities. Patient died of typhoid fever. The essayist did not state how often this abnormality occurs. Eighth, rupture of intrapericardial aneurysm. There were four aneurysmal sacs just inside the pericardium where the aorta joins the heart. Subject was syphilitic. Case nine, pneumonia from unidentified bacillus, long hair-like and resembled the Boas-Oppler bacillus so often found in the stomach. Tenth, case of bilateral double ureters, both emptying into the bladder. Eleventh, acute hemorrhagic pancreatitis. Refused operation. All symptoms pointed to high strangulation which diagnosis was made. Twelfth, retroperitoneal lipoma weighing 50 pounds. Could have been easily removed. This patient had been operated on twice, once for cystic tumor of each ovary as large as a quart cup, and once for multiple myomectomy. Thirteenth, man shot in chest, ball passing through the heart emerging in the axilla, again penetrating the skin, ranging down the left arm and found at the wrist. Fourteenth, man shot twice, once in side of head in frontal region, ball passing through skull and found beneath the skin on opposite side; the second shot penetrated the back, passed through the bladder, skirted the pelvis in the subcutaneous tissue, and found just beneath the skin 4 inches from the point of entrance.

April 20, a paper on "Typhoid Fever" was presented in two parts by Dr. Freed, etiology and pathology, and Dr. Wedel, diagnosis and treatment. The essayist said the infection was due to the Eberth bacillus and the common medium conveying the disease was water, although it is recognized that it may be acquired in other ways but that it was necessary for the bacillus to enter the digestive tract. The bacillus enters the blood in great numbers during the first week of the disease and in rapidly decreasing numbers each subsequent week. The bacilli hold fast their toxin, are intracellular, hence called endotoxin which is liberated only on the disintegration of the bacilli, the only other disease in this respect being Asiatic cholera. Unlike diphtheria which is a local disease in which the toxin is secreted and formed by the living bacilli and then absorbed into the circulation and may quickly overwhelm the system. Hence antitoxin as curative of diphtheria and typhoid vaccine to prevent typhoid fever, thus making a distinction between an antitoxin and a vaccine. The bacillus is killed at 60 C. but is not affected by cold, even that of liquid air. Dr. Wedel discussed the treatment by hygiene, diet, necessary bathing and not too much medication.

April 27, a paper in two parts entitled "Intestinal Stasis with Shadow Box Illustrations," by Dr. Woodard, symptomatology and diagnosis, and Dr. Weinstein, treatment. The first essayist outlined the conditions leading to auto-intoxication with the variety of symptoms dependent on fermentation, absorption, etc. Dr. Weinstein discussed the treatment which was mainly eliminative, regulation of diet, and in some cases surgical interference.

MEMBERS REINSTATED DURING MAY

Member	Town	County
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M. M. Wells	Fairland	Shelby
W. B. Siders	Millersburg	Elkhart
O. A. Collins	Mohawk	Hancock
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S. W. Boran	Poseyville	Posey
J. R. Ranes	Mt. Vernon	Posey
W. E. Pennington	Indianapolis	Marion
J. B. Young	Worthington	Greene
B. E. Malone	Columbus	Montana

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

Secretogen.—To call attention to the unfounded and extravagant claims made for internal secretion products, the Council on Pharmacy and Chemistry reports on Secretogen Elixir and Secretogen Tablets, sold by the G. W. Carnrick Co. The report discusses the insufficiency of the evidence for the administration of secretin—claimed to be present in these preparations. The Council holds that a rational basis for the therapeutic value of Secretogen is lacking because there is no evidence that the absence of secretin is a cause of gastro-intestinal diseases, and because there is no evidence that secretin in any form is physiologically active when administered by the mouth (*Jour. A. M. A.*, May 1, 1915, p. 1518).

The Oxypathor.—An order forbidding the use of the United States mails has been issued against the Oxypathor Company, Buffalo, N. Y., and its branches at Columbus, Ohio, and Wilmington, Del. The Oxypathor consists essentially of a piece of nickel-plated tubing filled with inert material, sealed and having attached to each end a flexible cord with a garter-like attachment at the free ends. This outfit was sold with the absurd claim that it caused the absorption of large quantities of the oxygen through the skin of the user (*Jour. A. M. A.*, May 8, 1915, p. 1600).

Burnham's Soluble Iodine.—The Council on Pharmacy and Chemistry reports that Burnham's Soluble Iodine is a semi-secret preparation exploited by extravagant and dangerous therapeutic claims and therefore ineligible for New and Nonofficial Reme-

dies. The A. M. A. Chemical Laboratory has shown that the official tincture of iodine, diluted one-half, would be essentially equivalent to the Burnham preparation. While the promoters claim that the administration of free iodine is therapeutically superior to the administration of iodides, this is a fallacy. The small dose of Burnham's Soluble Iodine recommended by the manufacturer accounts for the claimed freedom from symptoms of iodism. The Council considers as particularly reprehensible the recommendation to inject the preparation intravenously and the proposed indiscriminate use in tuberculosis (*Jour. A. M. A.*, May 15, 1915, p. 1673).

VENARSEN.—The Council on Pharmacy and Chemistry reports that while formerly Venarsen was marketed with indefinite statements as to its identity and in a way to suggest analogy with salvarsan, it is now admitted to be essentially a sodium cacodylate solution, each ampule containing about 9 grains sodium cacodylate, 1/40 grain mercuric iodid and ¾ grain sodium iodid. The Council finds the therapeutic claims made for Venarsen to be exaggerated and unwarranted and holds the administration of sodium cacodylate and mercuric iodid in fixed proportions intravenously to be an irrational procedure (*Jour. A. M. A.*, May 22, 1915, p. 1780).

NOMENCLATURE OF DRUGS.—The first requisite of successful prescribing is to know what one is giving. Non-descriptive or therapeutically suggestive names for drugs lead to uncritical prescribing, as has been shown by the random use of heroin and the untoward results from Atoxyl. Often proprietary names make it possible to charge an exorbitant price for a well-known drug, as when hexamethylenamin is sold as Uritone, Urotropine or Cystogen and theobromin sodium salicylate as Diuretin. Since the action of drugs depends on their chemical nature, the name should at least suggest the chemical composition of the drug or its source and relationship. The lack of scientific nomenclature of drugs is discreditable and hampering to modern medicine. Physicians should eschew the fanciful or therapeutically suggestive names provided by manufacturers and give preference whenever possible to non-proprietary descriptive names for drugs (*Jour. A. M. A.*, May 29, 1915, p. 1853).

BOOK REVIEWS

SURGERY OF THE BLOOD VESSELS. By J. Shelton Horsley, M.D., F.A.C.S., Surgeon-in-Charge of St. Elizabeth's Hospital, Richmond, Va.; a founder and fellow of the American College of Surgeons; Ex-President of the Richmond Academy of Medicine and Surgery; Member of Southern Surgical and Gynecological Association, etc. Pp. 304. Illustrated. St. Louis: C. V. Mosby Company, 1915. Cloth, $4.00 net.

Blood vessel surgery has now reached the point where it behooves every surgeon to become more or less familiar with most of its salient points. Modern medical literature abounds with methods for transfusion; so much so that hardly a week goes by but that somebody is publishing a new and simpler method for the transfusion of blood. It therefore becomes a matter of some satisfaction to have at hand in one's library a brief description of the simpler, more reliable methods for accomplishing this purpose. Any man who is doing either routine or emergency surgery would do well to have Dr. Horsley's handbook close by in order to meet any emergencies that may arise.

MEDICAL ELECTRICITY AND ROENTGEN RAYS AND RADIUM. By Sinclair Tousey, A.M., M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Second edition, thoroughly revised and enlarged. Octavo of 1219 pages, with 798 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $7.50 net; Half Morocco, $9.00 net.

The strides in medical electricity are so rapid that a period of five years marks an advance in the science that necessitates practically rewriting the subject. With the exception of the few fundamental principles which underlie this specialty and those well recognized facts which will remain undisturbed for all time, Dr. Tousey has had just this task before him. Among the many advances of the last five years that are described in the new volume may be mentioned diothermy, sinusoidal currents, intensifying screens for radiography, certain advances in roentgenotherapy, the Coolidge and similar roentgen tubes, the newer methods of measuring dosage, and radium therapy.

We find no mention of the hydrogen Roentgen-ray tube recently elaborated by the Snook Manufacturing Company, for which the manufacturers claim a marked similarity of advantages to the Coolidge tube.

The author's claims for radium therapy in malignant diseases are certainly conservative since he credits Abbe of New York with about the only positive cure of a truly malignant disease which has been reported.

All told the work is very complete, conservative and satisfactorily detailed.

PYELOGRAPHY (PYELO-URETEROGRAPHY). A STUDY OF THE NORMAL AND PATHOLOGIC ANATOMY OF THE RENAL PELVIS AND URETER. By William F. Braasch, M.D., Mayo Clinic, Rochester, Minn. Octavo volume of 323 pages, containing 296 pyelograms. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $5.00 net.

For anyone who has had the privilege of witnessing Dr. Braasch's work, the announcement that he was publishing some of his results in pyelography would be most welcome news, for it is doubtful if there is anybody in the world who has done as much or better work in this line than he.

As for the work itself, it is worthy the name of both a combined atlas and pyelographic differential diagnosis. Dr. Braasch's record of hundreds of collargol injections without untoward symptoms certainly gives him license to speak with authority on the safety of the procedure when utilized according to his technic, so that any fears concerning the utilization of this valuable method of kidney diagnosis will be dispelled by a study of his work. Those who have had experience in trying to make a positive diagnosis of ureteral stones, particularly in the lower third of the ureter, will appreciate the significance of the aid offered by Dr. Braasch through the collargol picture, as well as its superiority over the older method of the stileted catheter. As the author well says, a dilatation of the ureter might permit a ureteral shadow to be some distance from the stileted catheter and appear to be extra-ureteral when, as a matter of fact, a well-made pyelogram would reveal the stone to be lying in a dilated portion of the ureter. This is only one of the many satisfactory points in differential diagnosis brought out by Dr. Braasch in his characteristic fashion which makes for clearness, conciseness and brevity.

Undoubtedly the work will stand not only as one of the prominent monographs on the subject but as a masterpiece in finer differential diagnosis as related to disorders of the urinary system.

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NEWS. Our readers are requested to send us items of news of interest to the general medical profession of Indiana. Marked copies of local newspapers containing matters of interest to the physicians of the State will be appreciated. We should like to know the name of the sender in every instance. Correspondence on matters of clinical interest will be welcomed, and secretaries of medical societies are in particular requested to furnish condensed reports of all meetings of their respective societies. Copy for THE JOURNAL must be in the editorial office not later than the first of each month, and it will be appreciated if copy can be sent in earlier.

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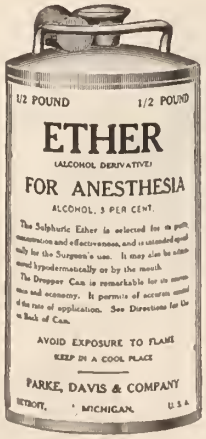

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THE INDIANA STATE MEDICAL ASSOCIATION

Next Annual Session, Indianapolis, September 23 and 24, 1915

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ORIGINAL ARTICLES

HEREDITY IN RELATION TO MALIGNANT DISEASES, VIEWED IN THE LIGHT OF MODERN RESEARCH

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Practicing physicians have repeatedly noted the familial occurrence of malignant diseases, but the question of how important is heredity in the causation of neoplasms has not yet been answered. The reasons for this are apparent. Pathology as a science is too recent for extended and accurate observations on the familial occurrence of cancer in the human species to have accumulated. The length of time between generations and the impracticability of controlling mating under experimental conditions constitute almost insurmountable barriers to scientific observations. Hence investigations in this line have of necessity been restricted to animals. Fortunately neoplasms of the different types found in man are by no means uncommon in birds and mammals. Fox has performed necropsy on every bird and mammal which died at the Philadelphia Zoological Gardens during a decade closing in 1912. His series includes 2,533 necropsies, and of this number 1.34 per cent. showed neoplasms of various types, many of which were malignant. These neoplasms were found in a wide range of species, from the mouse to the zebra, and from the gold-finch to the wild turkey. It is fair to assume that the same laws of heredity and physiology are concerned with the occurrence of tumors in birds and mammals as in man, and there is no evidence on which to conclude that the main etiologic factors are different in different species.

Much work has been done on tumors in mice, chickens, etc., but in the main the investigations have been carried out by transplanting cancer cells from one individual and grafting them on another. Obviously a cancer produced in this manner is an acquired character of a parasitic nature, cannot be expected to influence the primordial germ cells of the reproductive system, and hence would not be expected to reappear in the offspring any more than other acquired characteristics, e. g., the amputation of a digit or a cicatrix from a lesion.

The most extended series of observations thus far published on the relation of heredity to the occurrence of cancer are those of Maude Slye.[2] In this series no cancer grafts or inoculations were performed. Observations were made only on those neoplasms which developed spontaneously in mice. The series includes necropsies of over 6,500 mice, with special reference to the occurrence of cancer. She observed that no cancers developed in youth or adolescence—the period of growth. They occurred very rarely in mice under 1 year of age, but frequently in prime adult life and in old age. Very frequently the site of occurrence was at points of irritation or overstrain, as those mammae which had been most sucked. In all the series there were 390 unquestioned cases of tumor comprising over 4 per cent. of all those mice which lived to adult or cancer age. Complete individual records and charts showing lines of descent by generations are submitted in the published reports. No attempt will be made here to abstract them.

1. Fox: Jour. Path. and Bact., 1912, xvii, 217.

2. Ztschr. für Krebsforsch., 1913, xiii, No. 3; Proceedings of the Am. Soc. for Cancer Research, 1913; Jour. Med. Research, 1914, xxx, 281.

In observing the relationship of heredity to the occurrence of cancer, it was found that of 155 cases, 146 occurred in mice of cancerous ancestry. In one strain arising from a cancerous female, whose ancestors for two generations had been cancerous, and a male of cancerous family, but having no cancer history himself, there had been 193 descendants examined at the date of the report. Of these, over 43 per cent. were cancerous. Many of the 139 died before reaching cancer age, hence it is fair to assume that the percentage would be higher had all the descendants lived to adult life. In another strain arising from cancerous parents of cancerous ancestry, every one of the offspring developed tumor either malignant or benign.

It was found by mating cancerous females with males of noncancerous ancestry, or vice versa, that about one in four of the offspring developed cancer. Also that by selecting the pairs offspring could be produced either cancerous or free from cancer at will. In other words, cancer in mice was found to be an inherited trait, a mode of growth, and as such it conformed quite closely to the mendelian law of heredity. It occurred as a recessive rather than as a dominant characteristic, but as such it appeared in the offspring as certainly and in approximately the same proportion as would any other recessive characteristic, for example, an albinic coat of fur.

Attempts were made to transmit cancer by direct means other than from parent to offspring. Cancerous mice were caged with noncancerous; cancerous females allowed to nurse noncancerous young; young of cancerous parentage allowed to suckle noncancerous females, etc., but in none of these conditions was there evidence of a case of the disease arising by direct transmission.

If we accept the observations of Miss Slye, we cannot escape the conclusion that whatever other factors may act as exciting causes, determining the site of the neoplasm, heredity must be recognized as acknowledged as a potent predisposing factor; and that due consideration must be given it in all measures looking toward limiting the occurrence of malignant diseases. Those interested in investigations bearing on the physical welfare of the human species will await with interest further observations on the relationship of heredity to the occurrence of neoplasms.

IMPORTANCE OF AN EARLY DIAGNOSIS OF CANCER

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Greater than even the doctor's wisdom and skill is that inscrutable *vis medicatrix naturae,* which assures for the human race a spontaneous recovery from most of its ailments, but even it is impotent when the tentacles of cancer seize the body. In these other conditions it matters not so much what diagnosis is made or when it is made, or even what treatment is instituted so long as it is a rational regimè. But cancer brooks no delay and admits of no such masterly inactivity. A fire does not bide the time of the helmeted fireman.

What is an early diagnosis? How long are these riotous cells of the body held in leash, and when does the infection escape into the nearest lymph-node or blood stream and become disseminated throughout the individual? Most of the so-called signs and symptoms are due to secondary manifestations, viz., pain from pressure and hemorrhage from deep destruction of tissue. In cancer of the breast it is not when the axillary glands are palpably enlarged, or the areola eroded from duct cancer. In carcinoma of the uterus, it is not when there is fever, a malodorous discharge and pain, for early cancer is always painless. In epithelioma of the lip is not when there is demonstrable lymphatic enlargement. Of course, it is impossible to antedate all of the metastases in diagnosing these cases, but if we cannot make an "early" diagnosis, we can at least make an "earlier" one.

Why diagnose early? Why, indeed, if you are still incredulous concerning surgical relief? The old pessimism was due to a late diagnosis. The new optimism is due to an early diagnosis and operation. Forty years ago the best surgeons were curing only 5 per cent. of carcinoma of the breast. Thirty years ago not over 20 per cent. Now the best figures are 44 per cent., although Rodman claims 80 per cent. if there has been no involvement of the axilla. While not overlooking the advance in surgical technic, it is safe to state that these figures would not be possible were it not for a new conscience among the profession, and laity as well, toward breast tumors.

Granted that we do realize the importance of an early diagnosis, what definitely can we do? Early cancer of the rectum is diagnosed as hemorrhoids ninety-nine times out of one

hundred in Indiana simply because the patient complains of pain and bleeding. He usually, in fact, makes his own diagnosis; and the doctor, avoiding such a disagreeable procedure as a proctologic examination, takes the patient's word for it, prescribing the usual salves and suppositories. How many gynecologists have seen cases of advanced carcinoma, the patient stating that she had had a menorrhagia or metrorrhagia for months or years, but the family physician had never made a vaginal examination. We must insist on more exploratories, not only suggest but demand because there is no medical treatment. It is the fault of the doctor for not being more decided in his opinions. It is the fault of the patient for procrastinating after being told his condition.

It would be well for every physician to hang up on his desk, staring him in the face every day in the year so that he would be continually on his guard, a list of such precancerous conditions as warts, moles, nevi, cervical tears, erosion and ulcer (diagnostic subterfuges) any breast tumor, especially in the upper outer quadrant, discharge from the nipple, etc. Forty-one per cent. of all mammary diseases are carcinoma. The cancer age is 35-50 and if there appear during this period any indurations, fissures, hematemesis, melena, hematuria, metrorrhagia, menorrhagia, loss of weight or dyspepsia, they should be thoroughly investigated by a physician to ascertain if there is a chance of malignancy. (Levin.)

Women come to the age of frequency of cancer with many benign conditions which serve as opportunities for the introduction of the cancer infection or furnish the irritation which lights up the malignant proliferating process. Pathology has no place in the human body, much less in an organ of great cancer frequency. Any tumor, erosion, ulceration, cystic degeneration that does not yield to simple means should be removed, and this correction of all pelvic pathology as it occurs near the end of the child-bearing period vastly increases the longevity of woman by lessening her chances of developing cancer. Radical removal is at present our best method of attack, but surgery must find its greatest success in not more radical removal, but in early opportunity. (Barrett.)

Do not be deceived by the growth remaining stationary. The patient temporarily has an immunity, but any intercurrent condition or lowering of resistance will break down this barrier. Long continued ether or chloroform anesthesia will do this, hence the need for shorter operations. The presence of this natural early immunity points to the golden time for diagnosis and operation. Delay past this time is fatal, and points the finger of accusation to the doctor's neglect.

The cancer death rate in the registration area of the United States for 1913 was about 80 per 100,000, which marks the highest point it has ever reached, there being an uninterrupted increase since 1900. Working out the law of averages, each physician in Indiana should have seen three cases of cancer of the uterus and two cases of cancer of the stomach in 1913. Did you recognize yours, and if so at what stage?

There is an importance relating to the doctor as well as to the patient. We are all seeking fame and good repute, and a low mortality rate in our practice is conducive to success. Why not work harder discovering earlier cancer before it becomes inoperable? What would be the result for one year in Indiana if every member of this Association would endeavor to make one more early diagnosis of cancer than he did last year? Be suspicious and look for it often. Be pessimistic in diagnosis, be optimistic in treatment. Cabot says that a diagnosis is oftentimes the result of an obsession on the part of the physician. It would be a good thing if we all had the cancer obsession for a while at least.

The research of Miss Slye warns one to be particularly active in watching for cancer in individuals having a high cancer ancestry, and any over irritation of the tissues is potentially a carcinomatous condition as a family or blood relationship can be established in at least 10 per cent. of all cases.

The responsibility is on the general practitioner and internist. The rest is merely a matter of expert mechanics in removing it. This point is important, as the family physician may think that if cancer is strictly surgical he is a negligible quantity in the case. He and the patient should feel that arriving at the early diagnosis is worth more in every respect (and therefore financially) than the surgical operation itself. Our responsibility does not cease with our own utmost efforts, as we cannot make use of all the available means for diagnosis. Therefore let us call in the laboratory co-worker and the roentgenologist.

In a recent review on roentgenology of gastric cancer, Cole gives 94 per cent. of absolutely correct roentgenological diagnoses. Carman

gives diagnostic signs in 93 per cent. In conclusion it may be said that the roentgenology of the gastro-intestinal tract has been brought to a precision which entitles it to rank with the most approved clinical methods. The roentgenologist is needed as a consultant, and he in turn needs the assistance of his confreres. The diagnostic concept of the present day demands a survey of the entire case with a detail map of the gastro-intestinal tract for either a medical or a surgical campaign. (Crane.)

Do we need further admonition? Does not Mayo call attention to the fact that pre-existing lesions play the most important part of the known factors which surround the development of cancer; that such precancerous lesions are produced by some habit or life condition which causes chronic irritation; that where cancer in the human is frequent a close study of the habits of civilized man as contrasted with primitive races and lower animals, where similar lesions are conspicuously rare, may be of value; and finally, that the prophylaxis of cancer depends, first, on a change in those cancer-producing habits and, second, on the early removal of all precancerous lesions and sources of chronic irritation?

Moreover Cullen, quoting Thornton, says a very grave responsibility lies at the doors of the medical profession for the small progress made in the early diagnosis of uterine cancer and its successful treatment. How is an early diagnosis to be made? Clearly by neglecting no menstrual departure from the normal, however trivial it may at first sight appear, but at once to encourage the patient to accurately describe symptoms, and above all to insist in the most determined manner on a local examination. If you have any doubt after such an examination, let me implore you to urge that the patient should at once seek the advice of some one who has larger opportunities than yourself for forming a sound opinion.

"And what shall I more say. For the time will fail me if I tell" what the masters of diagnosis have thundered in our ears. To continue in the words of the great Apostle, "Therefore let us also, seeing that we are compassed about with so great a cloud of witnesses, lay aside every weight (i. e., doubt as to the right course to pursue) and the sin which doth so easily beset us" (i. e., the failure to thoroughly examine our cases) and pledge ourselves anew to combat the cancer problem with more fervor, more intelligence and more hopefulness.

PRECANCEROUS LESIONS

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As the term "precancerous lesion" is commonly employed, it means any lesion, whether congenital, inflammatory or traumatic, which may give rise to cancer. This usage implies the belief that a benign lesion may become malignant. Most clinicians hold this opinion, but all pathologists do not accept it; many of the latter thinking that every malignant growth is so from the outset. No matter which view is the correct one, the belief in precancerous lesions has done much good, if in no other way by directing attention to cancers while the trouble is still entirely local, and therefore capable of complete removal.

From the large literature devoted to this subject we have selected the following facts, about which there is general agreement, as a basis for our discussion:

1. Cancer always starts in one epithelial cell or group of epithelial cells. It is, therefore, at first an entirely local growth.

2. Broadly stated the most frequent sites of cancer are the sexual organs of women—uterus and breast—the gastro-intestinal tract, the face, lower lip and oral cavity. Cancer is especially liable to start at points where one form of epithelium joins another, as at the lip and external os of the uterus, also in organs which are subjected to enormous and rapid changes in the course of their physiological activity, e. g., the breast and uterus.

3. Cancer of the mouth and skin never starts in a healthy spot (Mayo[1] and Bloodgood[2]). There is always obtainable the history of a congenital or acquired lesion of some sort—a wart or mole, an old scar, an unhealed ulcer, a burn, etc. There are also good reasons to believe that cancer in deep-seated regions arises in similar fashion, for example, cancer of the stomach on old ulcers, cancer of the appendix in areas of epithelium isolated by obliteration of the lumen, cancer of the cervix about old tears, etc.

4. By far the greater number of lesions of the kind just described never give rise to cancer.

5. Cancer is preponderantly a disease of middle life and old age.

1. Mayo, W. J.: Collected Papers of the Mayo Clinic, 1914, p. 656.
2. Bloodgood: Jour. Am. Med. Assn., 1913, lxi, 2283-2286.

6. The general state of health of an individual has apparently nothing to do with his liability to cancer.

7. That heredity plays an important rôle in the development of cancer in man is disputed by many excellent clinical observers, though there is experimental evidence in support of it.

From the above statements of known facts it is evident that at least two factors are involved in the origin and growth of every cancer. These are: First, a susceptibility on the part of the body to cancer, and second, a local disturbance of epithelial growth. We shall discuss each of these separately.

That the body normally possesses a high degree of immunity to abnormal growth of its constituent tissues is evident. In fact, if we could only discover the mechanism whereby each tissue is allowed to grow so far and no farther, we should be in a fair way to unravel the riddle of cancer. The question is not so much why the skin, for example, sometimes develops cancer, as it is why the skin everywhere and always does not grow lawlessly and to excess, without regard to the needs of the rest of the body. The controlling mechanism in question is unknown, but certain clinical observations and facts derived from experiments on animals throw some light upon it.

The resistance to lawless growth of epithelium must vary with age. It may vary also from time to time in the individual.[3] A few well authenticated cases of spontaneous cure of cancer are on record. The results of radium treatment show that the resistance to the same type of growth, in corresponding regions, in individuals apparently alike, varies. We quote Burnham[4] on this point:

"It can be assumed that radiation deleteriously affects all living tissue, but that under this injurious influence the normal tissues are preserved because the fluids and protective agencies of the body are all constructed to help the normal tissues, and that the pathologic tissues disappear because, weakened by the radiation, they are unable to withstand the normal protective mechanisms of the body. Facts which seem to support this view are that the same kind of tumor or growth in two different individuals may react very differently under exactly similar amounts of radiation. This is as well marked in benign growths, such as uterine fibroids, as in cancer. Viewed from this standpoint, it would seem that a favorable effect from radium is obtainable only in such bodies as have definite immunizing substances in their fluids and tissues."

Murphy,[5] working at the Rockefeller Institute, has recently published results which indicate that the lymphoid tissue may have a great deal to do with the resistance of the body to both cancer and tuberculosis. Grafts of tissue from any given species of animal will never grow in an animal of another species. Murphy, however, has shown that such grafts develop in embryonic chicks. When he introduced with the foreign tissue a bit of spleen or bone marrow from an adult chicken, the foreign tissue failed to grow. The same facts held true for grafts of tumor from a foreign species. Murphy also showed that foreign grafts will take as well in an adult animal as in an embryo, provided the lymphatic tissues of the host have been destroyed by Roentgen rays. Of course the results of these experiments cannot be applied to cancer arising spontaneously in man, but they suggest the possibility at least of the protective rôle of the lymphocyte. Such work gives hope that we may ultimately discover means of immunization against cancer.

We have next to consider the local disturbance of epithelial growth from which the wild production of cells which we term cancer starts. From a prophylactic standpoint this is all important, since it is the only one of the two factors involved in the origin of cancer which with our present knowledge we can hope to control.

I have already stated briefly the situations at which cancers are most frequently found and the so-called precancerous conditions which may give rise to them. As will be seen from the definition at the beginning of this article, the term precancerous is commonly given a very broad and somewhat indefinite meaning. MacCarty[6] has endeavored to restrict the application of the word to "local lesions in which cellular changes are taking place that surpass the normal attempt at repair of the lesion itself, but which are not as yet infiltrating surrounding tissue." * The cells in such cases are often indistinguishable from cancer cells, but while

3. Handley: Monograph on Cancer of the Breast.
4. Burnham: Johns Hopkins Hosp., Bull., xxvi, No. 291.
5. Murphy: Jour. Exper. Med., 1913, xvii, No. 4; ibid, xix, Nos. 2, 4 and 5; also Jour. Am. Med. Assn., May 9, 1914, lxii, 1459.
6. MacCarty: Collected Papers of the Mayo Clinic, 1914.
* William Mayo's summary of MacCarty's conclusion.

their power of reproduction is above normal they have not yet acquired the power of invading surrounding parts, which is typical of cancer. This is a useful distinction from both a scientific and practical standpoint and should be generally adopted.

To the writer it seems that those who uphold the causal relation of chronic irritation to cancer have made good their contention. There can be no doubt, for example, as to the causal relation of betel nut chewing to cancer of the mouth, or to cancer of the abdomen to burns by the firebasket carried on the abdomen by certain natives of India, or of syphilis to cancer of the oral cavity, or of Roentgen-ray irritation to cancer. Likewise gallstones and gastric ulcer have been shown to predispose to cancer.

But while all this is true, it seems evident that mere mechanical irritation unassociated with any other factor is not sufficient to produce cancer. A common corn or callous is subjected to the most prolonged and constant trauma imaginable, yet cancer arising in these lesions is practically unknown. Infection or chemical irritation, or irritation of some other sort, must act in conjunction with trauma to produce a malignant change in the epithelium.

The application of the foregoing facts to the prevention of cancer is evident, but a consideration of this topic is beyond the proposed scope of this paper. This has been the presentation of certain clinical and experimental observations which seem to give a rational basis for the hope that we may sometime discover the etiology of cancer.

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THE RELATIONSHIP OF GASTRIC ULCER TO GASTRIC CANCER

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The relationship of gastric ulcer to gastric cancer is one of the problems on the solution of which therapeutics very largely depends. If a gastric ulcer is very prone, or prone at all, to become a gastric cancer, then it should and must be dealt with as a much more serious disease than would otherwise be the case.

Before considering the clinical evidence bearing on the question immediately in hand, there are certain facts relating to the cancer problem in general which have a special bearing, and which may, therefore, very properly be considered here. These facts relate mainly to the etiology of cancer. While the cancer problem is perhaps very far from a final solution, the transmissibility of certain types of both carcinoma and sarcoma in accordance with well-established biologic laws would seem to prove conclusively that malignant disease may be produced by a filterable virus. It is obviously not within the reasonable scope of this article to give a detailed review of these researches. They consist of experiments on animals with carcinomatous and sarcomatous tissues derived from tumors occurring both in human beings and in the lower animals. They conform very closely to similar investigations in regard to other infectious processes.

The parallelism extends apparently to the phenomena of immunity. Baeslick and Gaylord found, for instance, that in transmitting breast cancer to mice a certain proportion underwent spontaneous cure, and that these mice were thereafter found to be refractory to further inoculations, an active immunity having been established.

The immunity is apparently twofold: first, against the ultramicroscopic organism, which probably constitutes the virus, and second, against the neoplastic cells, which are themselves capable of prolific transplantation or "metastasis."

It seems probable that this virus is not of bacterial, but of protozoal, nature. At least it is very suggestive that the well-known presence of "inclusions" in cancer is shared by a considerable group of protozoal diseases, including molluscum contagiosum, hydrophobia, variola, trachoma, etc.

The evidence seems to indicate that there are several "cancer viruses." So far as we can determine, therefore, there is no single specific cancer or sarcoma germ. It is in fact quite conceivable that other biochemical agents than those derived from living micro-organisms, either bacterial or protozoal, might by their action on living cells produce those biologic changes which constitute the essential factors of malignant neoplasm. Be this as it may, the best working hypothesis of malignant neoplasm seems to me to be that which assumes the peculiar action of some biochemical agent on predisposed cells, in such a manner as to so enormously increase their proliferative tendencies that their nutritional integrity is threatened or

destroyed, and more or less serious damage done to surrounding structures by infiltration and external pressure, and to more distant tissues by the formation of metastases.

There are facts in the experimental work done along these lines which are quite in accord with the familiar clinical observation of antecedent irritative lesions or processes. Both carcinoma and sarcoma, for example, have been found starting in the walls of echinococcus cysts in rats, just as cancer is frequently found in the walls of gallbladders irritated by the presence of gallstones. The great frequency and importance of antecedent irritation is well shown by von Brun, who found evidences of such irritation in all but forty-eight of 368 cases of skin cancer. The bearing of these facts on the incidence of gastric cancer in patients suffering from ulcer of the stomach is obvious and furnishes strong a priori grounds for believing in the occurrence of malignant transformation.

It seems to me that the time has come when a new and broader conception of malignant disease is due. Hitherto, when we said that it consisted of the local endowment of cell life with a tendency to rapid and fatally destructive proliferation, often if not usually retaining these characteristics when transported through lymph or blood channels to other parts of the body, we had expressed not only all we knew, but about all that could be plausibly surmised. Today we are justified, in my opinion, in assuming, as a good working hypothesis, strongly supported by experimental facts and entirely consistent with clinical observation, that this morbid endowment is the result of a biochemical agent acting on the cells; that this biochemical agent is derived at least in part from a living filterable ultramicroscopic organism; and that these biochemical agents (for there are probably several) exert this peculiar effect on cells whose resistance is lowered, or perhaps whose sensitivity is exaggerated by long-continued irritation, hereditary tendencies, racial proclivities possibly, or other unknown factors. It would be idle to speculate on the clinical source of these hypothetical cancer toxins. We cannot say that their existence is actually proved excepting, perhaps, in some experimental work on the lower animals, but this conception of malignant neoplasms, by far the most plausible and best grounded, should be tentatively adopted as a basis of medical thought, while we await its confirmation or its successor.

Let us now consider the question from the purely clinical point of view. There is a wide divergence of opinion among clinicians as to transformation of gastric ulcer into gastric cancer. The problem may be attacked from two angles:

1. What proportion of cases of gastric ulcer, if any, become malignant?

2. What proportion of cases of gastric cancer have developed on the site of an old ulcer?

The question of the number of gastric ulcers that later afford the basis for the development of cancer is one on which authorities differ widely. Lockwood and most of the older writers say that from 3 to 4 per cent. of ulcer cases develop cancer. Billeter, in tracing 116 cases 4 years or more old, found but one had developed cancer.

The other aspect of the question, namely, the number of cancers that develop on previous ulcers, is more susceptible of proof. However, the evidence as interpreted by the various observers is quite as conflicting as that previously cited. Wilson and McCarty find that between 60 and 70 per cent. of all cases of proved cancer present pathologic evidence, gross and microscopic, of a previously existing ulcer, that is, show large ulcers with scar tissue centers and overhanging borders deep in the base of which cancer is present. They find, too, that in almost every instance that the cancers presenting these pathologic characteristics have originated on the lesser curvature, which is the usual site of ulcer. Aschoff, on the other hand, thinks these figures are much too high, and yet he bases his studies on pathologic findings. McCarty and Broders, in a study of 684 specimens, found 191 ulcers without histologic evidence of cancer, 470 ulcers with cancer and 21 ulcers in which the presence of cancer was doubtful. They emphasize this common coincidence of malignant disease with ulceration and say that it is more important to study the subject from this standpoint than to concern oneself about how many benign ulcers later undergo malignant degeneration. Studying the question merely from the clinical side, Friedenwald reviewed 1,000 cases of cancer, in which but 23 per cent. gave a previous history of any indigestion whatsoever, and of these but 7.3 per cent. gave what he calls a definite ulcer history. On the contrary, Smithies, using as his criteria Friedenwald's symptom-complex of ulcer—gastric malnutrition between 10 and 70 years of age, characterized by periodic or continuous abdominal discomfort or pain, fre-

quently bearing relation to food ingestion, and often associated with epigastric and dorsal tenderness, vomiting, loss of blood and hyperacid gastric contents; and Osler and McCrae's symptom-complex taken clinically to indicate primary gastric cancer—a gastric malfunction of downwardly progressive nature, occurring between 40 and 70 years of age, characterized by abdominal distress or pain associated with cachexia, loss of blood, epigastric tumor, vomiting, and with gastric contents which revealed motor defects, low free hydrochloric acid, organic acids and foreign micro-organisms—found that about 60 per cent. of the subsequently demonstrated cases of cancer gave earlier clinical evidences which we associate with chronic gastric ulcer, prior to the time when the ailment assumed the clinical picture which we associate with gastric cancer.

Smithies further calls attention to the fact that the average length of time of all symptoms in the cases clinically satisfying the symptom-complex of cancer alone was seven months, while in the cases clinically satisfying the symptom-complex of chronic gastric disorder previous to the period of evident malignancy the average duration of symptoms was 11.4 years. In the latter group the average duration of the supervening malignant course was six months. It is thus manifest, according to the interpretation of Smithies, that the periods of downward progression (gastric cancer) closely approximate in the two classes of cases, namely, those which are primary cancer and those which follow gastric ulcer. In this series of Smithies but four cases of chronic ulcer in which gastro-enterostomy was done later developed cancer. Wilson says that though this seems to be a strongly presumptive argument against the theory that cancer develops on preceding ulcer, we must remember that in the presence of a gastro-enterostomy the entire physiology of the stomach and the related viscera has been greatly changed by the establishment of drainage. Robson says that 59.3 per cent. of all cases of cancer operated by him have the history suggesting the possibility of previous ulcer. Osler, on the other hand, in a clinical review of 150 cases of cancer, found a previous ulcer history in only 2.6 per cent., and remarks that even in these it was not clear cut. Fenwick found that 3 per cent. of cancer cases gave previous ulcer history, Eichorst 2 per cent. and Lockwood 7 per cent., and that 14 per cent. gave a history of some indigestion.

Dr. Max Einhorn, while admitting, of course, that cancer may develop on the site of gastric ulcer, takes the position that the "frequency of cancer in all stomachs is just as great as in those of people with ulcer."

Dr. J. A. Lichty concludes that a very low percentage of cases of gastric ulcer become malignant. He had had some cases of gastric ulcer under observation for fifteen years. In two of his cases gastro-enterostomy was done, scar tissue was found at the pylorus, which was supposed to be benign, and five years later these patients died of cancer.

Dr. J. C. Hemmeter is of the opinion that there is no close relationship existing between gastric ulcer and gastric cancer. He quotes Hirshfeld to the effect that no connection exists between chronic gastric ulcer and gastric cancer. Hirschfeld's clinical studies were made in Zurich, Munich and Vienna, in which cities 3 per cent. of all patients entering the hospital are affected with gastric ulcer. In Berlin and Hamburg 7 per cent. of all such cases are gastric ulcer; and it is pointed out that in spite of this relative frequency of gastric ulcer, in the two groups of cities referred to, gastric ulcer occurs less frequently in Hamburg and Berlin than in the other group.

The observations of Billeter, already referred to, published in 1914, were made on 116 patients on whom gastro-enterostomies were made from 1888 to 1910, the postoperative histories being very critically studied. As no excisions were made, the scar tissue was, of course, left in the stomach wall in every case. The shortest period of observation was four years, the longest twenty-six years. Eighty-eight of the 116 patients were still living. Nineteen had died, but only two had suffered from gastric carcinoma and one of these was primary.

I might add that in my own experience I have never seen the transformation of gastric ulcer into gastric cancer. This may, of course, have happened in some of the cases in which the diagnosis of gastric ulcer was made and which later disappeared from observation. I do not know exactly how many cases of gastric ulcer have been under my observation, but am satisfied that in my earlier experience many of the cases of intractable chronic indigestion in which I made the diagnosis of gastritis were really cases of gastric ulcer. In looking over the clinical records which formed the basis of a paper read before the American Gastro-Enterological Association at the Washington meeting

in 1903, I am satisfied now that I would change the diagnosis in a considerable number from chronic gastritis to gastric ulcer.[1] While I have not made a systematic effort to follow up the clinical history of all the cases which were diagnosticated as gastric ulcer, and of those which probably should have been, yet no case so far as I know which came under observation without a strong suspicion of malignancy ever presented the history of malignant disease later.

I cannot pursue the great mass of conflicting evidence further at this time. It is difficult to reconcile such careful studies as those made by Billeter with only one proved case of gastric cancer secondary to gastric ulcer out of 116 cases of gastric ulcer with those of the Mayo clinic in which pathologic evidence of antecedent ulcer is claimed to exist in 71 per cent. of the cases of gastric cancer. I do not feel competent to critically review and discuss the histologic evidence on which some of these conclusions are based. After carefully reviewing the pathologic evidence offered in favor of the very frequent malignant transformation of gastric ulcer and placing it side by side with the conflicting clinical data available, I must say that for myself I doubt the validity of the evidence on which these conclusions are based. When the clinician is told, for example, by Aschoff, that the characteristic cell proliferation which is claimed to be distinctive of cancer has been found within twenty-four hours after operation for gastric ulcer; by others that the round-celled infiltration of the ulcer process is also present in secondary ulcerations of cancerous tissue; by Ernest Adolph Schmidt that in one or two days or even a shorter period of time extensive ulcerative destruction of a gastric cancer can occur, leaving carcinomatous tissue surrounding it and making it extremely difficult to decide which was the primary and which the secondary process, to say nothing of the numerous other pathologic and clinical discrepancies from equally reliable and eminent sources, he seems justified in concluding that the histopathologic data which serve as the basis of these conclusions are too uncertain to be relied on.

The following conclusions are offered without attempting a complete survey of the ground on which they are based:

1. The best working hypothesis concerning the genesis of carcinoma assumes: (*a*) a biochemical toxin, partly or entirely of protozoal or bacterial origin; (*b*) chronic irritation, mechanical or chemical, which lowers the resistance or increases the sensitivity of cells to biochemical poisons, which excite the riotous and destructive proliferation which is characteristic of malignant disease; (*c*) as in other infectious processes, so here certain predisposing factors, such, for example, as individual and familial tendencies, racial proclivities, etc.

2. This hypothesis makes plausible the malignant transformation of gastric ulcer, inasmuch as one of the three etiologic factors indicated above, irritation, is conspicuously present for long periods.

3. On the other hand, the well-known liability of benign neoplasms to undergo malignant change can scarcely be considered as supporting the theory of the malignant transformation of gastric ulcer, because the "scar tissue" surrounding an ulcer, while it is a neoplastic tissue, is formed in the process, and limited by the requirements of repair, and it is not, like the benign neoplasms, the product of a spontaneous pathologic proliferation.

4. The clinical and pathologic evidence of malignant transformation is so conflicting that its frequent occurrence must be regarded as not proved.

5. It seems probable, largely on a priori grounds, that gastric cancer would be more likely to develop in the site of a chronic ulcer than elsewhere, but a gastro-enterostomy probably does not render the occurrence much less likely, as shown by one case in Billeter's series and four in that of Smithies, and excision would seem to be the only procedure offering any insurance against whatever cancer hazard a gastric ulcer patient presents.

6. Gastric ulcer is primarily a medical and not a surgical disease. It becomes surgical, (*a*) when pyloric stenosis results from cicatricial contraction, or marked stasis occurs, unrelieved by suitable treatment; (*b*) when a symptomatic cure fails to follow a sufficiently prolonged and scientifically conducted treatment under strict hospital regimen; (*c*) when there is Roentgen-ray or other evidence of perigastritis with resulting adhesions.

7. If a gastric ulcer either fails to heal or, having healed, recurs under the best regimen available in the individual case, an exploration should be made and the ulcer area resected if possible, both because of its obstinacy, and the danger, even though remote, of secondary cancerous degeneration.

1. McCaskey, G. W.: Chronic Gastritis, a Clinical Study of 600 Cases, New York Med. Jour., Aug. 15, 1913.

ROENTGEN-RAY DIAGNOSIS OF CANCER OF THE GASTRO-INTESTINAL TRACT

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The diagnosis of carcinoma of the gastro-intestinal tract by the Roentgen ray has, during the last few years, come into general use and offers valuable aid to other methods of diagnosis. Often a Roentgen study alone will give positive evidence of existing malignancy. When outlined by an opaque substance such as a bismuth or barium meal, the viscera, such as the esophagus, stomach and intestines, may be studied under the fluoroscopic screen and on the radiographic plate. Thus we may find obstruction or irregularities caused by the inroads of carcinomatous growth on the hollow viscera. These inroads, known as "fillings defects," may be quite small when the carcinoma is beginning and cause only slight indentation of the normal outline, or the growth may be so advanced as to cause more or less obliteration of the stomach or intestinal lumen. The anterior or posterior wall may alone be involved, and in this way displace the bismuth and show as a clear area in the midst of the shadows. These "filling defects" are almost pathognomonic of cancer, especially when they show a roughened outline or typical finger-print encroachments. There are other but less important signs of gastro-intestinal cancer which must also be considered. Such are the gaping pylorus of a non-obstructive tumor of the stomach, stenosis of the pylorus or intestines with retained bismuth after a time when the normal stomach or intestines should be empty, absent or diminished peristalsis of the stomach, lessened mobility and painful pressure points.

In the Roentgen diagnosis of the digestive tract, as in the physical study of the chest or abdomen, we must know the normal before we can detect the abnormal. Normally no other organs differ so markedly in size, shape and position as the stomach and intestines. Many factors are concerned in bringing this about, but it must be clearly kept in mind before final conclusions can be drawn.

Also the effect of retained food, of spasm, gas, adhesions or extrinsic tumors encroaching on the normal lumen must all be considered, for they may distort the normal outline and closely simulate the effects of cancerous growths. A proper Roentgen-ray study of the gastro-intestinal tract should include both fluoroscopic and radiographic examination. The fluoroscopic examination is more important in many cases, but the plate may show fine detail which the eye cannot detect on the fluoroscopic screen, especially if the patient is large. The serial radiography of L. G. Cole of New York or the cinematographic study are too expensive to ever come into general use. A screen examination with the patient standing, and in some cases recumbent, followed by from two to six plates, will in the vast majority of instances give valuable evidence, which with the history and physical findings will lead to a positive diagnosis.

Fig. 1.—Carcinoma of the esophagus with partial obstruction. Note the dilatation of the esophagus above, caused by the obstruction of the tumor mass. Inoperable. Patient improving under Roentgen-ray treatment by the "massive dose" method.

The esophagus and colon are best studied fluoroscopically. A bismuth paste may be swallowed and on the fluoroscopic screen we may note any retardation or obstruction in the esophagus. A plate then may be taken to bring out the fine details. The colon is studied with the patient recumbent, the Roentgen-ray tube below and the screen on the abdomen. A barium enema is then given and is followed on the screen as it enters the rectum, fills the sigmoid, descending, transverse and ascending colon and cecum. Palpation is made and the patient also viewed standing to note if ptosis is

present. A large plate is then made, or, at times, stereoscopic plates to give the exact relationship.

As to a diagnosis of early carcinoma, I believe the Roentgen ray is much more valuable than any other method of examination. Unfortunately, these patients are, as a rule, sent to us too late for a diagnosis of early cancer. When the patient presents the clinical symptoms of carcinoma, such as palpable tumor and bloody vomit and food retention, it is too late for a hopeful surgical operation. At this time the Roentgen ray will show in a majority of cases a too extensive carcinomatous involvement to

Fig. 2.—Carcinoma of the stomach. Note the typical finger print "filling defect" with roughening on the greater curvature, which extends toward the cardia. Inoperable.

warrant surgical intervention. These cases are hopeless and they constitute a reproach on the medical profession, which is making so little effort at an early diagnosis. Every patient of middle age or past showing digestive symptoms not relieved in a short time by diet and simple remedies should be considered a possible or a probable victim of cancer. He should be emphatically warned of this fact; he should be watched and examined repeatedly and finally exploratory laparotomy advised, even if no positive symptoms are present. In these early cases, I believe, lies the great value of a Roentgen study. By repeated examinations and the taking of a series of plates in all positions, many of these early cancers may be diagnosed, long before the physical or chemical signs are recognizable. Small "filling defects" or roughened areas indicating the encroachment of beginning

Fig. 3.—Carcinoma of the pylorus involving small area on the greater curvature. Note the small "filling defect." Patient operated on and cured.

Fig. 4.—Carcinoma of the sigmoid. Note the roughened outline in the left pelvis. An early case. Operated on and cured.

tumors in the stomach or intestinal lumen will show; and when found on a series of plates taken at different times our interpretations must point to a possible or probable cancer. In my experience such findings of early cancer have been rare, because the cases are brought to me too late; and if the physician waits for the

chemical signs or a palpable tumor or a bloody vomit or gastric retention or bowel obstruction he will wait too long.

Gastric ulcer, as a beginning of gastric cancer, should also be considered. Many surgeons are advising the removal of ulcers and ulcer scars surgically as a prevention of cancer. In the diagnosis of ulcer the Roentgen ray is a most important aid.

The laity and many of the profession must be educated to the fact that the early diagnosis means that any case of so-called "dyspepsia" in a patient over 30 years may be the beginning of cancer, which, with our present knowledge, presents no diagnostic symptoms unless it may be found on the Roentgen-ray plate. The future hope of controlling gastro-intestinal carcinoma lies in the wide dissemination of this knowledge.

I quote from Dr. Bloodgood, in a recent article on "Stomach Carcinoma": "Our adult population must be informed, with the highest authority behind it, that epigastric discomfort aggravated by eating solid food is a sufficient warning. They must be told that such symptoms by no means mean cancer, or disease that may end in cancer, but that with these warnings they should seek, not treatment, but a thorough examination by a competent physician trained in the investigation of gastric diseases. They must be informed that restricted diet and some medicine will often give them relief; but if the disease is cancer, or something that may ultimately be cancer, such relieving treatment will only increase the danger. A thorough examination is the essential thing, and they must know that a thorough examination consists of repeated gastric analyses and the investigation with the fluoroscope or roentgenograms. No other examination will be sufficient.

"Persons so educated with this correct information will undoubtedly have the courage to act. The responsibility then falls on the physician. I am confident that after most careful clinical examination, repeated gastric analyses and Roentgen-ray studies, lesions of the stomach which should be subjected to surgery will not be overlooked, and that our comparative figures will show an increasing number of gastric ulcers, an increasing number of gastric ulcers with microscopic changes suggesting early cancer, an increasing number of operable masses in the stomach which are microscopically distinctly cancer and an increasing number of permanent cures among the latter.

"With this earlier intervention, the mortality of gastrectomy will decrease."

TREATMENT OF INOPERABLE MALIGNANT DISEASE

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It is a well-recognized, but none the less regrettable, fact that in the present state of cancer therapy, operative treatment means late treatment. How much more desperate and less promising must be the condition, then, when, after one, two or three unsuccessful attempts at eradication, the surgeon turns the cancer patient back to the internist or perhaps the radiologist for the final struggle, with the odds 100 to 1 against him. From this standpoint, then, it is distinctly worth while taking the measure of any procedure that may reasonably be considered to offer even that desperate chance, the heritage of procrastination or ignorance, which so commonly awaits this class of patients. The pity, so obvious to all medical men, is that there is need for such a thing as treatment for inoperable malignancy.

Such biologic treatment for inoperable malignancy as the use of trypsin and amylopsin, rather extensively tried out a number of years ago, needs mention only to be placed in the historical category.

After that period came that of chemotherapy with colloidal solutions of certain metalloids and metals, especially selenium, vanadium and copper. Practically all of the earlier work with these agents was carried on by animal experimentation, and as recently as 1911, when Wassermann published his report on the treatment of rat tumors by intravenous injection of selenium salts. This was followed by other workers in Germany, such as Neuberg, and in this country by Leo Loeb. It is, of course, obvious that the basis of this treatment was founded on the fact that any effectual remedy for malignant disease must be constitutionally applied, particularly in the advanced cases, in order to be uniformly distributed to the various possible metastases. Believing that selenium possessed a high degree of selective affinity for tumor cells, Wassermann cast about for some highly diffusible vehicle and finally selected eosin. Injections in mice inoculated with transplanted tumors of both malignant types resulted in a softening of the tumors to such an extent that fluctuation and ultimate absorption took place, and in the cured animals recurrences, of course, did not take place. Although Wassermann never gave his subsequent report, it was learned

from Keysser that by far the larger proportion of the animals perished during the stage of softening and a cure resulted in only from 3 to 5 per cent., death being attributed to the absorption of toxic products from the tumor, although it is by no means proved that the compound itself did not possess sufficiently toxic effects to have killed the animals. This earlier work was followed by further experimentation along the same line by Caspari and Löhe, Petri, Ascoli and many others. Carl Lewin was among the first to point out that the therapeutic results obtained in subcutaneous mouse tumors could not be logically applied to the treatment of human cancers, since this type of growth is usually limited by a distinct capsule, with no tendency to infiltrative growth. Acting on this suggestion, Keysser developed a technic whereby malignant neoplasms could be implanted in the liver, spleen, kidneys and other parts of the mouse and in these localities the transplants infiltrated rapidly, thereby simulating the human type of growth. He further found that on such growths the treatment appeared to exercise not the slightest influence.

In a series of experiments a number of years ago, Weil[1] was able to show that sodium iodid injected intravenously accumulated in tumors in larger amounts than in any other tissue of the body, in rats, and such dyes as Congo red similarly injected could be demonstrated in tumors long after the rest of the body had recovered its normal color, it being invariably localized in the necrotic portions of the tumor. The same phenomenon he was able to demonstrate in the human, as, for example, cancer of the breast, which, after injection, showed, at operation, areas of various size intensely discolored by the dye and corresponding both to the naked eye and under the microscope to the necrotic parts of the tumor. This phenomenon may be due either to a higher affinity by such areas for the chemical injected or a slower absorption due to circulatory deficiency. Experimental data suffice to show that such internal portions of the tumor might undergo liquefaction and yet the tumors be not cured. This author has recently studied the effects of colloidal copper, advocated by Gaube du Gers and others, on malignant tumors in men and has been unable to find that it has any therapeutic value, and, in fact, when the various chemotherapeutic methods of treatment of malignancy have been closely scrutinized, it is, in Weil's opinion, apparent that none of them can lay claim to therapeutic effectiveness.

Next may be considered the effect of caustics, such as zinc chlorid and heat. It is perfectly obvious, of course, that the purely local effect of an escharotic can never result in the cure of a widely disseminated malignant disease, but it is quite remarkable how many desperately sick individuals suffering from badly infected malignant disease of the uterus can be made temporarily to clean up, lose their fever, regain their appetite and be given often many weeks of reasonable comfort by this simple procedure. The same is true of the therapeutic effect of heat, and, in fact, it is questionable whether anybody ever obtained any better results in cancer of the uterus by any means whatsoever than were obtained by Byrne of Brooklyn through vaginal hysterectomy by means of the electrocautery. Indeed, it was probably this experience which induced Percy[2] of Galesburg to devise his method of slow cauterization by means of a cold iron through the water-cooled vaginal speculum.

Paul Ehrlich was probably the first to suggest the greater susceptibility of malignant tissue to heat than the surrounding normal tissue, while Haaland showed that carcinoma cells are more vulnerable to heat than sarcoma and die after an exposure of one-half hour to temperature of 111.2 F. Loeb demonstrated the death of sarcoma cells after thirty minutes' exposure to a temperature of 113 F. In fact, the destructive effect of heat on malignant tissue has been demonstrated by many other observers, and for such tissue the heat seems to have a more or less selective action. The agents so far considered for the production of the heat have been hot air, hot water, steam, electrocoagulation, fulguration and actual cautery. The first three of these are of little value because of their slight penetration, while electrocoagulation affects the tissues for a depth of from 5 to 8 cm. in two minutes; the rapidity of action of the latter measure and the difficulty of its control, especially in the cavities, make it an agent to be used only with rare good judgment. The de Keating-Hart method of fulguration has probably acted as a prophylactic in the prevention of postoperative recurrences in a number of cases. The method of Percy has the advantage of allowing heat of only the required degree of intensity to act on malignant tissue without endangering the vitality of

1. Jour. Am. Med. Assn., April 17, 1915.

2. Surg., Gynec. and Obst., xix, p. 452.

the surrounding normal tissue, and consists briefly in an electric-heating iron with rheostat control applied through a water-cooled vaginal speculum to such an extent that there is no burn- or bubbling save a very gentle simmer that can be heard, but with such resulting heat that the cancerous mass cannot be held in the gloved hand of the suregon. By this means the mass is not converted into charcoal, which inhibits further dissemination of heat and likewise prevents drainage. From his results so far obtained, Percy ventures the opinion that a large number of cases, if not practically hopeless when first presenting themselves for treatment, will give approximately 50 per cent. remaining free from recurrence over five years. Clark[3] has recently written further concerning the Percy method, presenting a preliminary report on some twenty-five cases. He emphasizes the fact, further, that many of the far-advanced and seemingly hopeless cases could be by this method transformed into operable ones with some hope of complete eradication.

Among the other various agents advocated from time to time for the cure of inoperable malignancy, and of which there are legion, there is one which has stood the test of a rather prolonged time in a certain small percentage of cases, particularly of the sarcomatous variety, namely, the mixed toxins of erysipelas and prodigiosus (Coley). While there is no gainsaying the fact that it is characteristic of human nature for a man to be most enthusiastic about those things which he himself has created, yet Coley's report[4] of approximately 800 cases with a successful outcome in eighty cases, certainly presents an agent that merits consideration. When 10 per cent. of a series of 800 cases pronounced by most competent surgeons to be hopeless and incurable, and most of them with indubitable pathologic diagnoses, can be carried past the five-year limit, and some even twenty years, even though the treatment entails considerable discomfort, such method of treatment demands recognition at the hands of all those interested in cancer therapy. In his analysis of 134 microscopically proved cases treated by the mixed toxins, Harmer[5] presents the following conclusions:

"1. From this critical survey it seems fair to conclude that mixed toxins of streptococcus and *Bacillus prodigiosus* (Coley) are of value in certain cases of inoperable sarcoma.

"2. The treatment of primary or recurrent inoperable sarcoma with mixed toxins must be intensive. The increment of the dose and the interval between injections requires some experience. This method of treatment is distressing and is never certain. This analysis has been undertaken, therefore, in the hope of ascertaining the types of cases which offer reasonable expectation of benefit.

"3. The institution of this treatment is unjustifiable in cases in which operative measures of reasonable safety offer possible hope for removal. A frank statement of the nature and the severity of reactions and the probability of benefit should be made to the patient or some responsible person before the treatment is undertaken.

"4. Seventy-three cases after most rigorous criticism have been regarded as apparent cures.

"5. The small round-type cell apparently offers the greatest expectation of benefit, followed closely by the spindle-cell type (excluding fibrosarcoma). Only a relatively small number of mixed cell type have been benefited. The use of toxins in cases with multiple melanotic growths does not seem justifiable, but their use in single melanotic growths is legitimate.

"6. Regarding the tissue of origin, the greatest number of apparent cures have occurred in bone sarcomata (exclusive of giant-cell cases), over 18 per cent. of the total number of apparent cures, with an equal division of round-cell and spindle-cell types.

"7. Giant-cell cases, as defined in the text, furnish about 15 per cent. of the total number of apparent cures. The records seem to justify preliminary trials of toxins in carefully chosen cases in which slowly growing tumors have ruptured more or less extensively into the soft parts, rather than immediate amputation. With skilful judgment a few limbs have apparently been saved. If such treatment is practiced, the patient should understand that amputation may ultimately be necessary, and it should not be long deferred in the event of increased rapidity of growth, repeated hemorrhages, considerable absorption or superimposed infection.

"A small group, on account of anatomic situation, namely, extensive involvement of the vertebrae, defy surgical eradication. These, I believe, should be submitted primarily to surgical attack, followed immediately by toxin treatment. The records justify this practice.

3. Surg., Gynec. and Obst., May, 1915, p. 558.

4. The Treatment of Malignant Inoperable Tumors with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus, read before the Third International Conference of Cancer Research, Brussels, Aug. 1-5, 1913.

5. Boston Med. and Surg. Jour., clxxii, Nos. 9 to 12.

"8. Primary inoperable round-cell sarcomata of the cervical glands compose about 10 per cent. of apparent cures.

"9. Sarcomata arising from fascia and muscle, which have been apparently cured, have been situated in the lower extremity, abdominal wall and back. They compose about 16 per cent. of the total number of apparent cures. Nine of twelve are of spindle-cell type.

"10. In a small number of cases the toxins produce striking relief from pain."

More recently Coley[6] has presented a report of a series of sixty-four cases of cancer of the testis, one of the most unfavorable sites for the location of this disease, of which eleven remained well three years or more.

The wave of enthusiasm so prevalent a year or two ago concerning the curative effect of radium on malignant growths has gradually restricted itself to a consideration now of the limitations of this agent, the sequences and accidents following its use and the comparative results between Roentgen-ray and radium therapy. The last-named phase of the question has received renewed discussion, both because of the higher development of Roentgen-ray technic and because also such unfortunate effects as perforation of the hollow viscera are being reported in greater number as radium becomes more extensively used. Clark,[7] in reviewing the subject of cancer of the uterus, describes the work of Dessauer, an electrical engineer, who claims that it is technically possible to produce with the Roentgen-ray tube rays which have the efficiency of at least the softer gamma radiations of the radio-active substances, these rays possessing from ten to fifteen times more penetrating power than the ordinary so-called "hard" rays in general use. With these ultra-penetrating rays, Dessauer claimed to be able to direct radiations equal in value to several grams of radium, an amount greater than at present is ever available for therapeusis and which by suitable filters puts at one's disposal an artificial radium preparation of gigantic potency. These results, however, are those of an expert electrical engineer with the highest type of Roentgen-ray apparatus made, and do not represent the ordinary equipment of a hospital or practitioner.

Bumm of Berlin reports his results from the use of radiotherapy in 108 cases of uterine cancer for a sufficient length of time to produce some result. All showed an apparent local cure within three to five weeks—first a period of irritation with increase in the size of the mass, then shrinkage, disappearance of friable tissue, drying up of ulcerating surfaces, and gradual formation of a dense, firm scar at the site of the former cancerous growth. Microscopic examination shows such areas to be either dense masses of fibrous tissue in a high degree of degeneration with no trace of malignancy or containing an occasional small, almost indistinguishable clump of cells representing former cancer nests. He emphasizes the fact that the effect of radium is unfortunately a local one. Of the 108 cases, forty would have been classed as operable, the others hopeless; and so far only fifteen have shown signs of recurrence, although at least two-thirds have been under observation for less than six months. He is not a believer in the enormous quantities that some are using, and says there is great danger of serious injury to normal tissues in using larger amounts than 200 mg. of either radium or mesothorium. He is still a firm believer in Roentgen-ray treatment in cancer and now uses it in conjunction with mesothorium in practically all cases, feeling that much less destruction is caused by it than by the radio-active salts.

At first rather enthusiastic about radium treatment of malignant growths, Krönig was last year forced to admit that he had not succeeded in curing a single case of carcinoma in which metastases had occurred.

From the Münich Gynecological Clinic, Döderlein reports 153 cases of uterine cancer treated by radiotherapy, in which at the time of writing thirty-one patients presented neither objective nor subjective signs of the disease, although he considered the time as yet too short from which to draw definite conclusions. Among the unpleasant secondary effects noted by this author were fever, sometimes high and of many weeks' duration, the occurrence of a white false membrane on the surface of the destroyed tissue which soon produced a profuse, very foul-smelling discharge, rectal tenesmus, painful defecation, stricture formation in two cases and in four instances rectovaginal fistulae.

Although more hopeful concerning the radium treatment of inoperable malignancy than a year ago when he was using far too large doses, Schauta declares he will continue to operate on all operable cases, but will afterward subject them, as well as all inoperable cases, to radiation in restricted doses.

6. Transactions of the Southern Surgical and Gynecological Association, 1914.

7. Progressive Medicine, June 1, 1915, p. 187.

Rovsing goes so far as to declare that in his experience radium not only does not check the growth of cancer, but rather acts as a stimulant, since he has seen a number of cases in which small, comparatively benign, superficial growths were fanned into rapid and malignant proliferation following exposure to radium.

A very excellent summary on radium was published in book form last year by Newcomet.[8] On carcinoma of the prostate he reports a series of fifteen cases treated by Pasteau and Degrais with a subsidence of hematuria in some and a considerable improvement in others, although no cures are reported by these authors. Inoperable carcinoma of the bladder has been sometimes relieved by the use of radio-active waters applied locally, according to this author. Not very encouraging results have been reported from the radium treatment of the very malignant condition, carcinoma of the testicle. Concerning carcinoma of the uterus it may be said that the cervical types do better than do the lesions of the fundus.

In a series of seven cases of carcinoma of the stomach reported by Newcomet, only two were improved, while in another list containing five, none were benefited. In another case, wherein exploratory operation revealed carcinoma of the pylorus, Roentgen radiation was applied, with complete recovery, and at the present time the woman is still in good health. Indeed, as this author declares, in these deep cases it must not be forgotten that the Roentgen rays will at times yield as good results as the radio-active salts, and in some instances there is not the least doubt that the Roentgen rays should be the method of election. There are those who prefer to employ both forms of radiation in the deep cases, and among them is Czerny, who treated by the combined method fourteen cases, with improvement in 8.

Rectal carcinoma seems to yield more readily to radiation, possibly because there is more opportunity for direct contact with the agent.

Carcinoma in the intestinal and colonic portion of the bowel seems to bear about the same relation as regards radio-active treatment as though occurring in the stomach.

Regarding carcinoma of the breast, it must be remembered that there are various degrees of malignancy at this site, and for that reason the relative value of all forms of treatment must be closely scrutinized before definite prognosis can be made, or the value of any form of treatment determined. It is almost needless to say that the range of operability of lesions at this site should be given the widest latitude and that radiotherapy should be used as an invariable adjunct to operation in all malignant neoplasms of the breast. Newcomet is of the opinion that the Roentgen ray is the form of radiation most desirable in breast cancer.

Pinch reports one of apparent cure from the use of radium in carcinoma of the thyroid and definite improvement in another.

Regarding the use of radium or any other therapeutic agent in sarcoma, it should be borne in mind that this type of growth is the most irregular of all the malignant tumors, some forms of the small round-cell variety or even at times of the melanotic variety proving to be of very slow growth, and again some cases of the supposedly slow-growing giant-cell type taking on a very rapidly fatal course. The writer has under his care at the present time a case of melanotic sarcoma of the back, with the microscopic examination amply verifying the diagnosis, which recurred within three weeks after operation, with subsequent glandular involvement in the neck, and which under the Roentgen ray has now remained well for almost two years. This is only one example of the spectacular results that sometimes follow radiation in sarcoma. Indeed, spontaneous disappearance of this type of growth has been occasionally noted, and for this reason the greatest caution should be observed in estimating the efficiency of any form of treatment.

Through the use of improved technic, which includes proper filtration, cross-firing and the Coolidge tube, Pfahler has obtained some very striking results by Roentgen therapy in the treatment of deep-seated malignant disease. The conclusions he draws in a recent publication[9] are as follows:

"1. Malignant disease that can be completely removed I believe should be dealt with surgically.

"2. Each operation for malignant disease should be followed by postoperative treatment. The extent and character of this postoperative treatment will depend on the location of the disease.

"3. Where there is an absolute necessity for delay in operation from some other cause, the patient should be treated by means of the Roentgen rays, and this treatment should be directed toward the glandular area particularly.

8. Radium and Radiotherapy, by William S. Newcomet, M.D., Lea & Febiger, 1914.

9. Jour. Am. Med. Assn., May 1, 1915, p. 1477.

"4. Inoperable cases should always be given the benefit of the rays. Some of them will be removed and others made operable. Such treatment should be instituted at once and not as the patient approaches a dying condition.

"5. Local recurrences yield to Roentgen therapy fairly well, and some of these patients, I believe, can be made permanently well.

"6. Metastatic carcinoma, even when it affects the bones, has been shown to heal in at least one case which I reported."

Lunckenbein[10] was, a year or so ago, rather enthusiastic concerning the use of cancer extracts administered intravenously as a last resort in cases of inoperable malignancy. From his experience, now amounting to over forty cases, he feels justified in predicting that the intravenous injection of tumor extracts will prove in the near future to be the most efficient method for treatment of cancer and sarcoma. Schubert, however, from a series of experiments similar to those of Lunckenbein, is not so enthusiastic about the results, and considers the clinical application of the method as yet only in the experimental stage.

There remains finally to be considered a treatment, the perliminary report of which has recently been published by Beebe of New York.[11] For this "autolysin" treatment Beebe does not claim originality, but he has elaborated the agent originated by Horowitz, an Australian biologist and chemist. The preparation is a complex one, and consists of a powder made from a considerable number of substances of plant origin, namely, *Menyanthes trifoliata, Melilotus officinalis, Mentha crispa, Brassica alba, Anemone hepatica, Viola tricolor, Anthemis, Fructus colocynthidis, Lignum quassiae, Urtica dioica, Rudix rhei, Hedge hyssop.* Formerly these substances were utilized, both locally in the form of a poultice and by hypodermic injection, but latterly subcutaneous injections of the extract have to a considerable extent displaced the use of the poultice. In his article a series of eighteen cases is presented which show rather remarkable results, but as yet the use of the substance is largely in an experimental state and has been restricted by Beebe and his co-workers solely to their own use. Until its use becomes more widespread and the permanency of the results better established, the profession at large would better preserve its usual skepticism concerning "cures" for malignant disease.

10. München. med. Wchnschr., 1913, lx, 1931.
11. New York Med. Jour., May 15, 1915, p. 981.

INDICATIONS AND CONTRAINDICATIONS FOR THE OPERATIVE TREATMENT OF CANCER

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The cause of cancer is still unknown. In spite of the great amount of labor and research, we are unable to solve the essential question of this disease. It is fortunate, however, that clinical study has enabled us to lay down exact indications for operation and treatment.

There is no excuse, therefore, for us to hesitate or delay. There are facts, which if kept in mind, would guide us right and greatly reduce the number of deaths from this dread disease.

First, we know that many benign conditions may become malignant, which their removal would prevent.

Second, early and radical removal of cancer effects a cure.

Third, the radical extirpation of extensive and advanced growths followed with the application of heat, Roentgen ray or radium will cure cases which would otherwise prove fatal.

It is, therefore, a duty of physicians at any stage of cancer, from the precancerous to the late manifestations, to advise operation, unless it is absolutely impossible to remove all parts affected. Even in the hopeless cases much relief and prolongation of life may reward judicious operation and treatment.

The precancerous cases are many, the proportion of malignant degeneration small, still when the latter has begun, the percentage of recurrences is large. The operations, before they become cancerous, are trivial, not dangerous or mutilating, and there is no evidence for the popular belief that they are more apt to become cancerous by reason of their removal. Any benign tumor may undergo malignant degeneration. It may be harmless for years but when it changes, operation may be too late. The removal of connective tissue, fatty and other tumors as well as warts, moles, angioma, result in 100 per cent. of cures if done early, with practically no mutilation, while the removal after they become malignant is attended with a large percentage of recurrences. Infiltration or bruises which do not promptly disappear are very prone to develop into sarcoma and should early be treated. The public is being educated, and many come to the doctor, giving him an opportunity to remove them early.

The early, radical removal of cancer is attended with a high percentage of complete cures, while the converse is true of late cases. Success, therefore, depends on early diagnosis and a prompt and insistent recommendation of operation. It will not do to pass over any ailment lightly, for early cancer, especially in internal organs, can be discovered only by careful examination, and when it is diagnosed or the suspicion is strong, proper exploration should be promptly made. Too often the doctor hesitates to recommend an operation, waiting for developments. He fears the trouble may be less serious and he may be blamed for having urged an unnecessary operation. It is much better to remove a benign growth than to overlook a cancer, or to make an unnecessary exploration than to wait until it is too late to operate.

The third postulate is one that gives every surgeon great concern. What are we to do for the advanced case? We do not want to put a patient through a serious, painful operation and have him no better, or even in a worse condition; still, if there is any hope he should have the benefit of the doubt, for a small percentage are cured, and some who are not so fortunate are spared some of the pain and distress they would otherwise suffer. I do not mean those cases which are absolutely hopeless, but if there is any doubt, the operation should be done.

Cancer of the skin and mucous membrane is accessible and can be early diagnosed, and prompt, radical removal should be successful. Bloodgood, in a very able article, says: "Here we have to study 977 cases of epithelial tumors of the skin and visible mucous membrane, which have been subdivided into the following localizations: lower and upper lip, face, chin, eyelid, ear, nose, scalp, mucous membrane of the gum and mouth, tonsil and pharynx, larynx, tongue and floor of the mouth, skin of the neck, brachial cleft cancer, skin of the upper and lower extremities, penis and body. *In every one of these cases the cancer had developed in a preexisting lesion.* . . . In an experience, therefore, of more than twenty years with 920 cases of malignant tumors of the skin and mucous membranes, the percentage of cures varies from 33 to 98 in the four types of cancer. We feel certain that this number of cures should be greatly increased, in some localizations, to even 100 per cent."

Tumors of the breast give the same history of success or failure as they are removed early or late; again Bloodgood says: "After a most careful investigation of all the facts available from about 1,300 cases of tumors of the breast, we may formulate the following conclusions: If every woman over 25 years of age were to seek surgical advice the moment she felt a lump in the breast and the surgeon explored this lump at once, the probabilities are that the lump would prove to be benign in about 33 per cent. of cases; in the malignant cases the chances are that the tumor would be adenocarcinoma in 20 per cent. of the cases, with the probability of a cure of 100 per cent. If the lump represented the most malignant forms of cancer, the chances are 85 per cent. would be cured. Now, with the same good surgery, these figures should improve as the number of early cases increases. For undoubtedly many cases of cancer subjected to operative treatment late had been distinctly benign lumps of months or even years."

If a woman appears with a lump in the breast which is distinctly palpable (temporary occlusion of the mammary ducts excluded) it should at once be explored.

By incision the growths should be removed and a frozen section examined; if it is not clearly benign, the breast, with the axillary glands, should be excised at once. It is not safe to excise the lump and do the radical operation at an interval of several days or weeks, for should it prove malignant there is danger of increased activity of the growth. It is much better to make a radical operation at once; a few benign cases may be subjected to more mutilation than is necessary, these will be exceptional and the results in a large number of cases will be better.

When the skin is involved only wide dissection is successful and if there is any attachment to the pectoral muscles they should be radically excised.

I prefer, in extensive cases, to remove the muscles and breast en masse. Beginning the incision high, dividing the pectoral muscle and cleaning out the axillary first, then proceed downward and inward. By this means the lymphatics are divided before the growth is touched, diminishing the danger of pressing the cells into the lymphatic channels.

The high death rate from cancer of the uterus is due to delay on the part of the patient in consulting the physician. The public education has improved this condition and early operation is more frequently possible.

Cancer of the body yields a large percentage of cures since the glands are not involved as a rule and a hysterectomy removes the entire trouble.

Menorrhagia and metrorrhagia are the first symptoms, and any patient complaining of these should be thoroughly examined. The prognosis of cancer of the cervix is more unfavorable and the percentage of cures in the most favorable cases is small, even with the most radical operations.

Unfortunately, cancer of the cervix gives no symptoms in its early stages, and it can be diagnosed only by examination. When there is irregular flow of blood or free watery discharge, it is already far advanced. The genitals of all women who come with any affection, should be examined. Lacerations of the cervix repaired, erosions treated or excised and any doubtful growth radically removed. If we could here deal with the precancerous stage or the very early cases, high amputation of the cervix or hysterectomy would undoubtedly much improve our results.

Byrne of Brooklyn, many years ago advocated the high amputation of the cervix with the cautery and no one has equaled his results by any operation. I believe in all these cases the use of the cautery or heat will be serviceable.

In late, inoperable cases, curetting away the necrotic tissue and free use of the cautery give relief. One patient of mine was comparatively well for three years and Dr. Dorsett had one case which remained well for a longer period and seemed cured. Heat should be used in all these cases with or without excision, depending on the condition. It is not necessary to cauterize in all cases, a temperature of 120 to 140 F. will kill cancer cells in the tissues.

The more radical operation of Wertheim and others has a high initial mortality and so far has not shown a large percentage of cures. The status of these operations is not fully decided.

With cancer of internal organs, as the stomach, intestines, and kidney, for example, early diagnosis is the only hope. By a careful study we can hope in a considerable proportion to make an early radical operation and the percentage of cures will increase.

When a patient suffers with a disorder of the stomach which does not yield promptly to treatment, every means of examination should be used. A strong suspicion of cancer is suggested in a patient past 40, having an indigestion of comparatively short duration, steadily becoming worse, not relieved by treatment, and especially with history of digestive disturbance many years before, which is suggestive of ulcer, and with diminished free hydrochloric acid. Such a case should be thoroughly studied and explored early.

If we wait until a positive diagnosis can be made, that is, until there is a palpable tumor or definite Roentgen-ray findings, it will be too late for a curative operation.

I have found intelligent patients, when confronted with the facts, will take their part of the risk. I make it a rule to be perfectly frank, explaining the reasons for the recommendation and also the chances for error and have been rewarded in a few cases with success which at this time seems permanent.

The same is true of connective tissue growths or tumors and with sarcoma of the skin. The benign cases give no recurrence but when they become sarcomatous the cures are few. Bloodgood again reports: "Few in the profession know how relative few the cures are in sarcoma. Here we have 84 cases of the skin and soft parts with but 13 cures, or 15 per cent.; in the less malignant type 21 cases with 9 cures, or 42 per cent.; in the more malignant type, 63 cases with 5 cures, or less than 8 per cent. . . . There is no way to increase the number of cures in this type of malignant tumor except by educating the people and ourselves to the radical removal of skin and subcutaneous nodules the moment they appear. Such operations need never be mutilating nor dangerous. Intervention for the swelling after a trauma must also be resorted to early." The same, therefore, is true of all malignant growths, early diagnosis and removal give the highest percentage of cures. The greatest danger is delay.

In developed cases of sarcoma of the skin the Roentgen ray is more curative than in carcinoma. There are many records of desperate cases which have been permanently cured. In 1903, I reported a case of melanotic sarcoma of the face and neck, which had been excised three times, and the treatment by the Roentgen ray was undertaken as a last resort. The growth had progressed rapidly; improvement began at once and complete cure resulted and the patient is still well at this time.

Two years later a melanotic sarcoma of the breast in a man aged 35, which had been twice excised only to return, was cured and he has

been well, but in the last year he developed a tumor of the tibia which we think is sarcoma. This is now under treatment and seems a little better but the result is uncertain.

Bumm of Berlin and von Eisselberg of Vienna, have had favorable results in many inoperable cases of cancer of internal organs. They are very conservative in claiming cures but in some of their cases the growths have disappeared and the patients seem to be entirely relieved.

In Hochnegg's clinic I saw several cases of advanced cancer of the stomach, whose abdomen had been opened by a crucial incision and the wound packed with gauze and the Roentgen ray applied directly to the growth. Some of these patients claimed to be better. The use of massive doses by the Coolidge tube is still on trial. Some of our cases show improvement but it is too early to estimate the results.

CONCLUSIONS

The chief point in dealing with cancer is careful examination in every case and endeavor to make the diagnosis at the earliest moment.

Explore when in doubt about internal organs.

Remove all benign growths promptly, lest they become malignant.

Remove all malignant or suspicious growths as soon as they are discovered.

Remove all growths where there is a possible chance of a complete operation.

A few very advanced cases can be cured by partial removal supplemented by cautery or heat, Roentgen ray and radium.

CANCER IN INDIANA

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The registration area of the United States includes about 60 per cent. of the population. From the cancer statistics of this area it is calculated there were at least 75,000 deaths from cancer in the United States in 1914. In Indiana the records of ten years show the average annual deaths from cancer to be 1,810, an annual rate of 65.45, and, as in other states, after the age of 40, cancer is one of the most frequent causes of death. That cancer is increasing in the United States appears in Table A, and that it is increasing in certain other countries appears in Table B, which are given herewith. In Diagram I and also in Table C the fact is shown that Indiana is suffering from a yearly increase of cancer deaths. The slight decrease in the rate in 1914 in Indiana as appears in the curve in Diagram I, will not, judging from the increase of the previous years, prove permanent. In Table C it is seen that the age periods of 65-69 and 70-74 are the ones in which we are to expect the greatest number of cancer deaths. As in other states, females appear to be more liable to cancer than males in Indiana; for, in the recorded ten years there were of male and female cancer deaths, respectively 7,420 and 10,699.

TABLE A

MORTALITY FROM CANCER IN THE UNITED STATES REGISTRATION AREA, RATE PER 100,000 POPULATION

Year	Population	Deaths	Rate
1905	34,052,201	24,330	71.4
1906	41,983,419	29,020	69.1
1907	43,016,990	30,514	70.9
1908	46,789,913	33,465	71.5
1909	50,870,518	37,562	73.8
1910	53,843,896	41,039	76.2
1911	59,275,977	44,024	74.3
1912	60,427,133	46,531	77.0
1913	63,298,718	49,928	78.9

Quite every registration state reports a higher cancer death rate every year. But we are warned against too quickly assuming that cancer itself is increasing at such a rate as to cause alarm, for not a few hold that we should ascribe the recorded increase to more accurate diagnosis. In view of the accumulated facts and the many thorough investigations it is probable this contention is not well based. It is true that in the earlier periods of cancer registration, diagnosis was more faulty than in later periods, but surely this is not sufficient to account for the steady increase which is so general in all countries.

TABLE B

INTERNATIONAL CANCER STATISTICS, 1900-1909

(Rates per 100,000 Population)

	1900	1909	Actual increase	Per cent. of increase
United States	63.0	73.8	10.8	17.1
Switzerland	129.9	126.7	3.2*	2.5*
Netherlands	91.7	102.6	10.9	11.9
Scotland	79.0	101.6	22.6	28.6
England and Wales	82.9	96.1	13.2	15.9
Norway	90.8	94.6	3.8	4.2
German Empire	72.1	83.5	11.4	15.8
Ireland	60.8	80.0	19.2	31.6
Austria	70.9	78.6	7.7	10.9
New Zealand	56.3	73.2	16.9	30.0
Australia	62.6	72.3	9.7	15.5
Japan	45.4	65.2	19.8	43.6
Italy	52.2	63.5	11.3	21.6
Denmark	46.2	56.1	9.9	21.4
Spain	39.3	51.0	11.7	29.8

* Decrease.

Whether or not cancer is hereditary is a matter far from being settled. It possibly is not unlikely we shall eventually discover that like tuberculosis it runs in families because of the inheritance of non-resistant tissues to whatever the causative agent may be. Davenport, in commenting upon the high cancer death rate of Maine says: "Now I have no doubt that this is due to the presence of one or more races in Maine which are non-immune to cancer. I know that many medical men do not respond favorably to the contention that there is a racial cancer diathesis in man. To be sure, it has been repeatedly demonstrated that such result—the high incidence of numbers of the cancer race in an inbred community."

Cancer in every aspect is a human affliction transcending all others. Whether considered from its high rate of frequency occurrence, from its wide distribution, from the fearful disfigurement which attends it, from the complete disorganization and destruction of the internal organs, from the awful suffering it causes or from its practical certainty of death, it stands alone as the most terrible and awful of all known maladies. It has corroded the human race for centuries, and in this the twentieth century, we find it is increasing and from where

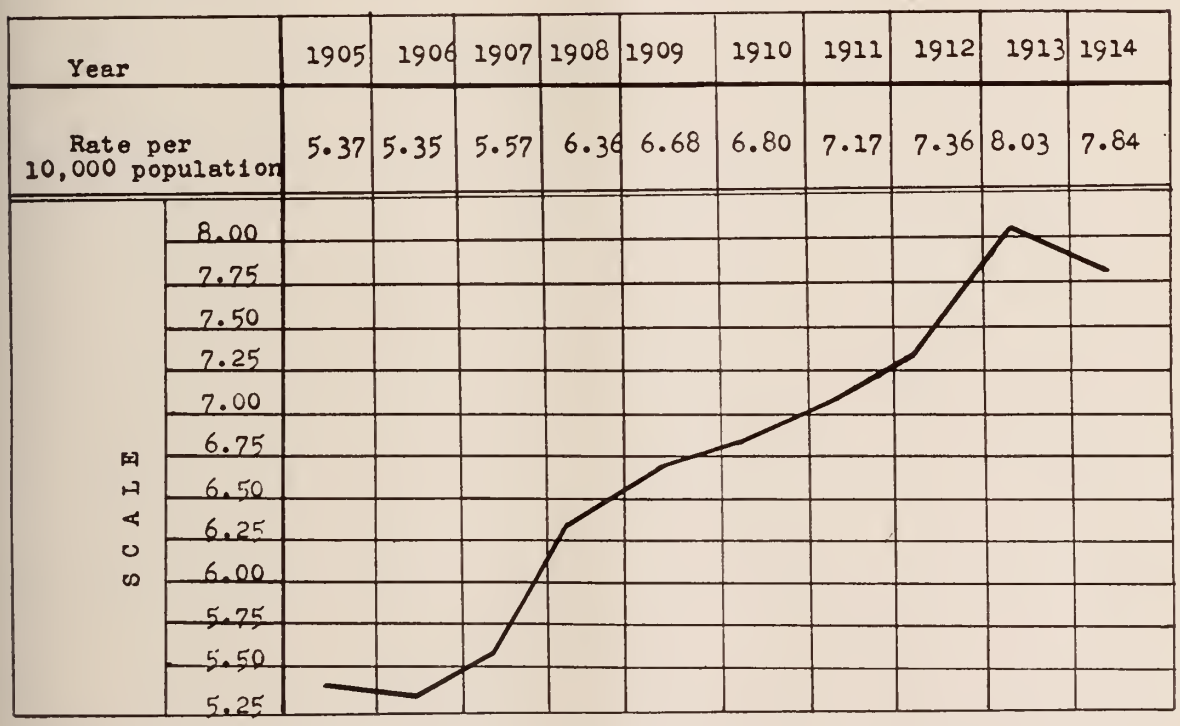

Diagram 1.—Diagram illustrating the apparent increase in cancer in Indiana from 1905 to 1914, inclusive, with death rate per 10,000 of the population.

races occur in mice and such human families as we have studied yield the same result as the mice studied, and indicate that resistance to cancer is a dominant trait, and that non-resistance appears in the children only when both parents belong to a non-resistant race. And this result is commonest, other things being equal, where cousin marriages are commonest, because that makes it probable that if one parent belongs to a cancer race the other—the cousin—will belong to the same cancer race. Now in rural Maine, cousin marriages are extremely frequent—especially in islands off the coast, and here we have the conditions for the and why it comes, we know not. While tuberculosis is largely a disease of insanitary conditions and poverty, cancer is an affliction more common among the well-to-do who are clean and well fed.

Without doubt, cancer is a real and terrible menace to the race, and *what can be done to prevent it?*—is a burning question.

Among primitive people cancer is extremely rare. Even at this time, after over 400 years contact with the white races, cancer among the American Indians hardly exists, for according to the U. S. Vital Statistics, only 14 cancer

deaths occurred in the year 1900 in 1,017 total deaths of Indians aged 45 and over.

During the period of slavery cancer was of rare occurrence among the negro population of the United States, but since freedom has been given the cancer death rate has increased rapidly. This is especially true of cancer of the uterus among negro women. This is stated upon the authority of Hoffman who has made a special study and analysis of the cancer death rates by races in the District of Columbia for the decade ending 1910. He found the mortality from all forms of cancer among males was 70.6 per 100,000 of white population, in contrast to a rate of only 38.6 for the colored. The cancer death rate of white females was 104.8 against a rate of 86.5 for colored females. The cancer death rate of negro males was 55 per cent. of the white male rate, but the cancer death rate of colored females was 83 per cent. of the rate for white females. If cancer is really a disease of civilization, as it is said to be, then surely there attends civilization some hygienic error or errors which must be discovered and corrected, or we perish. That riotous eating of flesh is the cause or a cause, has often been suggested by those whose utterances demand respect; yet most primitive peoples are large consumers of flesh. But it must be noted that savages have only the flesh of wild animals, and the civilized have practically only the flesh of domestic animals, and this may make a great difference. A few facts seem to warrant the conclusion that habits, occupations, injuries, etc., contribute in some way to the development of cancer. And a few good authorities believe that cancer is, in a measure at least, due to faulty assimilation, malnutrition or disturbed metabolism. This conclusion is sustained to a good degree by the preponderance of cancer of the stomach, liver and bowels, as compared with cancer of other organs. If finally proven that cancer is due primarily to parasitic infection or to some other causes that affect cell structure, still, for the present, we must rely upon its early discovery and removal if its ravages are to be checked. In this work it is of supreme importance that all physicians, and not only a percentage, become impressed with the fact that early discovery and early removal of cancer is our present sole reliance; and this general education being accomplished the profession must educate the people. This campaign of education has been begun and is well on its way. The American Society for the Control of Cancer, office address, 289 Fourth Avenue, New York City, is doing splendid work. The American Medical Association and other national medical societies, also many state and city medical societies have entered heartily into this service to mankind. But what have hygiene and health organizations and health officers done? They, of all others, should be at the front, but they seem not to be in evidence there, and this condition, if it persists, will mark incompetency.

TABLE C

DEATHS FROM CANCER IN INDIANA BY AGES, PERIODS AND SEX FROM 1905 TO 1914, INCLUSIVE

Year	Population	Age Period																											
		Under 1	1 Year	2 Years	3 Years	4 Years	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 95	Unknown	Total	Rate	Male	Female
1905	2,648,549	1	1	2	6	3	4	2	5	7	12	28	45	85	118	151	165	189	201	176	128	81	6	8	1,424	53.7	596	828
1906	2,648,549	...	...	...	...	1	3	2	5	13	14	35	49	92	131	164	135	186	171	173	130	95	10	8	1,417	53.5	564	853
1907	2,714,744	...	...	1	...	...	5	1	5	7	8	27	42	103	154	152	181	214	212	160	119	106	10	5	1,512	55.7	687	825
1908	2,730,144	1	1	1	1	1	3	3	3	9	23	22	70	82	140	189	236	252	240	198	149	105	9	1	1,739	63.6	755	984
1909	2,733,550	4	3	...	1	1	6	3	6	10	18	35	70	101	144	217	201	240	251	215	170	120	10	2	1,828	66.8	804	1,024
1910	2,700,876	...	2	4	3	...	3	3	6	4	14	30	66	104	190	189	213	254	222	205	180	101	43	1	1,837	68.0	722	1,115
1911	2,700,876	1	2	2	1	1	...	3	9	10	22	39	66	123	150	187	231	228	285	253	172	68	64	2	1,919	71.7	775	1,144
1912	2,730,506	...	1	1	1	1	4	5	4	9	16	44	65	111	134	200	265	255	305	246	193	107	51	...	2,018	73.6	797	1,221
1913	2,769,710	4	5	1	1	...	5	4	2	11	24	56	66	111	174	228	283	288	306	287	195	119	55	1	2,226	80.3	860	1,366
1914	2,796,957	1	2	3	1	4	1	2	8	9	24	46	77	123	179	218	276	275	302	273	203	119	46	1	2,193	78.4	854	1,339

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EDITORIALS

IMPORTANCE OF SYSTEMATIC PATHOLOGICAL EXAMINATION OF ALL NEOPLASMS

Until we learn the cause of tumor formation our conception of that form of disease will be unsatisfactory. The morphology of the cells that make up the neoplastic tissue must be the only basis we have upon which to classify the tumor, and it must also serve as the only criterion by which we form an idea as to the clinical course the tumor is most likely to follow.

Upon the basis of their clinical behavior tumors are divided into two groups, benign and malignant. The former includes those which do not directly kill the host in which they grow; the latter includes those which kill either by local recurrence or by internal metastases. In any case of new growth obviously the most important question that arises is into which one of these two groups does the tumor belong? In well-defined cases where the clinical characteristics are quite typical the physician should have no difficulty in arriving at the correct answer. In border-line cases, however, those in which the clinical manifestations present no diagnostic features a correct pre-operative diagnosis is practically impossible. These border-line cases are by no means rare or occasional; everyone with experience knows of their relative frequency. In such cases the diagnosis must be made at operation. The surgeon cannot act intelligently unless he knows just what the condition really is. To be sure immediate microscopic examination of frozen sections may be made and a fairly accurate diagnosis obtained, but the operator who proposes to rely entirely upon that diagnostic aid will be sorely disappointed now and then. No one claims 100 per cent. efficiency in immediate frozen section diagnosis. Such a diagnosis is to be used only as a link of more or less value in the complete chain of evidence. The surgeon who has to depend solely upon another's diagnosis finds himself greatly handicapped only too often, and in such a situation his surgical judgment inevitably becomes warped.

The idea is urged, therefore, that operators ought to direct more of their personal attention to surgical pathology in general and to the pathology of tumors in particular. No tumor should be passed up without a complete pathological examination, and the surgeon ought to take a personal interest in its examination. Everyone who proposes to deal with tumors should be his own pathologist, for to him a practical knowledge of the pathology of tumors is indispensable. His knowledge should be such that he may be able to decide almost conclusively from the clinical picture and the gross appearance of the neoplastic tissue not only whether the tumor to be attacked is benign or malignant but its degree of malignancy. To attain that degree of efficiency he must have had the proper training and he must continue to study the pathological aspects of all tumors that he comes across. Indeed, the importance of a systematic complete pathological examination of every new growth cannot be emphasized too strongly. The clinical record is incomplete without it, and an incomplete record is no better than none at all. Knowing that he will be checked up in every instance by microscopic study the surgeon will seek to become more expert in his clinical diagnoses. Perhaps the greatest benefit to be derived is the fact that after one has gone into the study of tumor pathology he soon learns to tell with a surprising degree of accuracy the exact type of a tumor by its clinical manifestations and gross appearance.

Mistakes in the diagnosis of new growths are nearly always absolutely avoidable. If an obvious case of malignant disease is not recognized until too late or a case of benign tumor is subjected to unnecessary mutilation an unpardonable blunder has occurred somewhere. With all the modern aids in the diagnosis of tumors there should be no guesswork, and the most valuable diagnostic aid is the microscopic examination. Just as the internist seeks to obtain all the pathological data of his clinical material so ought the surgeon to study the pathological aspects of his material, especially the tumors. Let it, therefore, be emphasized again that everyone who undertakes the operative treatment of tumors should make a complete systematic pathological examination in every case!

CONCERNING THE ETIOLOGICAL RELATIONSHIP BETWEEN CARCINOMA AND SARCOMA

Despite the absence of anything as definite as Koch's postulates to prove the assumption, there are, at present, several well-established facts that point toward the suspicion that there may be some common etiologic basis for the two forms of malignancy, carcinoma and sarcoma. And while, as yet, the bacterial theory for these diseases is only one of the various hypotheses under investigation, yet if such should eventually prove to be the cause of malignancy, it would not be a far cry to the possible transmutability from one strain to the other, just as Rosenau has shown with the streptococcus and pneumococcus. Indeed this idea has been expressed by Coley in his endeavor to find an explanation for the favorable influence exerted upon the various types of malignancy, and sarcoma in particular, by the toxins of the streptococcus erysipelatis. A staunch advocate of the extrinsic microbic theory of malignancy, he believes that sarcoma, epithelioma, endothelioma and carcinoma are all due to different species of organisms that are more or less closely related, and in support of the view concerning the similarity of the picture produced he cites the fact that the most experienced pathologists often differ among themselves in the classification of the various types of malignant tumors. Moullin, of London, goes so far as to say that no definite line can be drawn between cancer and sarcoma on the one hand, nor between cancer and certain varieties of undoubtedly innocent tumors on the other; also that it is a mistake to conceive of cancer as something apart from all tumors, with certain distinctive clinical features, such as the power of dissemination, which are, in reality, in no way peculiar to it.

Furthermore, inoculation experiments conducted with a view to obtaining additional light upon the relation of the two diseases, have been successful in producing typical adenocarcinoma from repeated transplantations of what was originally pure sarcomatous tissue. Again, Peyton Rous, experimenting with two spontaneous chicken tumors, unlike in several important respects, on transplantation produced neoplasms of identical character, and declares that present findings make it probable that, within certain limits, tumors of rather various character may be dependent upon a single agent. The agents producing his tumors, he did not believe to differ sufficiently to constitute a fundamental distinction, but judging from their effects, they "are almost undoubtedly different strains of a single disease cause."

The older view, held by both pathologists and surgeons, that the difference in age incidence offered one of the chief points of distinction between carcinoma and sarcoma, has latterly been practically disproven. That sarcoma can no longer be considered a disease of the young is well shown by an analysis of 265 consecutive cases of sarcoma at the University of Michigan by Weller, from which study it was demonstrated that the incidence of sarcoma is greatest at the age period 48 to 52. And the final conclusion drawn from this analysis was that "although in youth sarcoma incidence is somewhat higher than carcinoma incidence, there is throughout life a marked parallelism between the age incidence curves for the two types of malignancy, and for more than twenty years there is a practical coincidence, thus strongly suggesting that the causal or predisposing agencies in the two cases must either be identical or, at least, have much in common." The greater accuracy of present-day diagnosis is also probably responsible for the fact that more and more cases of carcinoma in early age are being reported. Castle finds that there are reported in the literature forty-two cases of cancer of the liver in childhood (under 16) with the majority of diagnoses accurately made. Carcinomata of the breast and of the uterus in the third decade are often seen in the larger surgical clinics of today.

While it must be admitted that most of our therapeutics is largely empiricism, yet it is perhaps not entirely irrelevant that not a few of our therapeutic measures directed toward the control of one form of malignancy also prove more or less efficacious for the other. Perhaps the best illustration of this fact is offered by the effect of radiotherapy whether by the Roentgen rays or radium. One of the most strikingly brilliant of Abbe's reported successes from the use of radium was in a case of multiple sarcomata of the scalp. While Coley's fluid has been largely used in sarcoma, with a reported successful percentage of ten, yet many cases of epithelioma and some of carcinoma have been greatly benefited thereby.

As a matter of fact, all of the theories concerning the origin of these two types of malignancy, whether it be Cohnheim's rest theory,

the parasitic or the irritation theories, answer about as well for one form as the other.

So that it may well be that sooner or later a common causal agent will be found which, deposited upon a certain field, will find such soil or tissue as will, by its nature, afford opportunity for only one type of invasion, whereas another field would permit of a rather different form of growth only. In other words, it may be that the environment of the host may be the determining influence upon the type to be assumed by the invading agent, be it parasite or otherwise. This, of course, is only one of the many features of the problem, which, in time, will doubtless find its solution.

THE ESSENTIALS OF SUCCESSFUL CANCER PROPHYLAXIS

Broadly speaking, successful cancer prophylaxis depends upon two factors, viz.: Cooperation upon the part of the public, and second, an intelligent interpretation and application of the known facts regarding cancer on the part of the medical profession. The greatest obstacle at present to public cooperation is the pessimistic attitude toward the curability of cancer. This pessimism is justifiable only when reference is made to cancer which can be diagnosed clinically.

My own personal belief is that quite the majority of people, who having a lesion that they believe to be cancerous at the moment, refuse to have it treated on the ground that if it is cancer it is incurable. At such a time the lesion is very likely a precancerous one, or an early malignancy, and in either case easily curable. But the pessimistic attitude leads to a fatal delay, so that we have a viscious circle established—late treatment, fatal outcome, disbelief in curability.

The pessimism regarding the curability of cancer is not supported by the facts. It is, on the contrary, a most easily curable disease, because at first it is a purely local disease and by the use of the knife can be completely eradicated if attacked in the early stage.

Nothing is more striking than the contrast between the results of treatment now and twenty-five years ago. Agnew in 1890 stated that he had never cured a case of cancer of the breast. Now the best statistics show from 50 per cent. to 75 per cent. of five-year cures. Agnew did a very local operation, removing only the breast, and his cases came to him late. Now a more extensive operation is done and the cases come earlier.

Information regarding the curability of cancer should be widely and energetically given to the public, and such information should come from the medical profession which is in possession of the facts.

It is an unfortunate situation, but probably true, that the quacks are treating more cases of cancer in Indiana than the regular profession. The Leach Cancer Sanatorium and the Radium Institute, both of Indianapolis, are two large and busy institutions. Both have investments of considerable amount, and have every indication of conducting a profitable business. They make their appeal to and draw their cases directly from the public.

These two thriving institutions are a standing monument to the neglect of physicians to properly inform the public on the facts relative to the cancer question.

The appeal of the quack is one of optimism, in sharp contrast to that of the medical profession, which heretofore has been one of pessimism. This situation should be reversed, and indeed the facts, as every one knows, make it imperative that it be reversed. In this state we have made no organized effort to reach the public with information on the cancer question. There exists a most urgent necessity that our state organization take cognizance of this phase of educational propaganda to the end that the public be informed of the known facts relative to cancer.

The Indianapolis Medical Society appointed a committee over a year ago for this purpose, but it has never made a report. As far as my knowledge goes, this represents the total organized effort in this state to do what is universally recognized must be done if any further progress is to be made in the control of cancer.

There are in existence three national organizations having for their purpose the dissemination of knowledge to the public. The Committee of Public Health and Education of the American Medical Association has a subcommittee on cancer. The Clinical Congress of Surgeons has a committee on cancer education, and the American Society for the Control of Cancer was organized over a year ago. The American Society has a small endowment and represents a working organization of great efficiency. They are anxious for the cooperation of state societies and our own state associa-

tion could do no better thing than appoint a committee to work in close cooperation with the American Society.

It is difficult to see how physicians can longer neglect the necessity for organized effort directed toward the enlightenment of the public on the accepted and well-known facts relative to cancer. No false conception of professional modesty or ethics should prevent us from vigorous effort to reach the public with the truth.

What are the main facts upon which there is general agreement and which should be widely published? 1. Cancer is a local disease in its early stage and easily curable. 2. Cancer never begins in a healthy spot, but is always preceded by some abnormality in the tissue in which or from which it develops. 3. Cancer is distinctly a disease of middle life, and has a predilection for certain sites, such as the lower lip, stomach, breast, cervix and rectum.

Reference has already been made to the necessity for creating in the minds of the public an attitude of optimism. Their support can not be obtained on any other ground.

There need be no distortion of facts in presenting the case, for the truth is that 100 per cent. of cancer cases can be cured if attacked in the precancerous stage or in the very earliest stage of malignancy. The Laboratory of Surgical Pathology of the University Medical School has an increasing number of specimens, a percentage of which unquestionably are precancerous lesions. They include benign hyperplasia of the mammary gland, both male and female; papillary warts of long standing and in positions exposed to constant trauma; congenital pigmented moles; benign tumors and leukoplakia of the lower lip.

While research workers have as yet failed to uncover the etiology of cancer, careful clinical observation has established beyond doubt that cancer is preceded, if not always, at least in the great majority of instances by certain alterations in the tissues benign in character and yet to be regarded as the initial stage in the life history of malignancy. The attention of physicians needs to be focused on this fact, for herein lies the possibility of cancer prophylaxis.

Unfortunately these precancerous lesions are usually painless and are considered to be of small moment, and as a result neglected by the patient. But our advice should be specific. Any tumor of the lower lip should be removed, as also any ulcer at this site which refuses to heal within a month should be regarded as precancerous and removed with the knife with a safe margin of healthy tissue. All tumors of the mammary gland should be surgically explored as soon as discovered and a diagnosis made either from the gross appearance or a frozen microscopic section and if found malignant a radical operation done immediately. If this rule were followed there would be a good many innocent breast tumors removed, but on the other hand there would be a great many lives saved now lost because a "watchful waiting" policy is practiced.

The surgical advice to remove every inflamed appendix within the first thirty-six hours of onset, if good surgery be available, is accepted as sound, and yet probably 75 per cent. of such cases would go to uncomplicated recovery if left alone. No such percentage of breast tumors will be found to be non-malignant, so that the logic of argument based on uncertainty of outcome demands the removal of all breast tumors as well as all inflamed appendices.

Cancer of the skin is usually of two types, differing greatly in their clinical characteristics and in the degree of their malignancy. The basal-celled epithelioma or rodent ulcer is a relatively benign cancer most frequently appearing on the face above the line of the mouth. The alae of the nose and the outer angle of the eye are favorite sites for its location. It frequently appears as a small, hard subcutaneous nodule, which undergoes a central necrosis and becomes an ulcer with elevated overhanging edges. Perhaps three months or longer have elapsed before this stage is reached. At this time it is a purely local lesion and as easily cured as the removal of a wen. A little cocain, a sharp knife and a couple of sutures will save a life. There is no doubt that a good many of this type of cancer are cured by caustic pastes and make the great per cent. of quack cures.

The other type of skin cancer is the spinal-celled epithelioma which because of its early metastasis to regional lymph nodes is very malignant and dangerous to life. This type is apt to begin in traumatized papillary warts, or old scars.

Whenever a wart of long standing begins to ulcerate or the keratinized epithelium of its surface breaks down, it is a danger signal and demands immediate removal. An old scar from a burn which ulcerates is quite likely to be a beginning cancer.

Cancer of the skin, breast and exposed mucous membranes offers an excellent opportunity for cancer prophylaxis if the right kind of information was in the hands of the public, and prompt and decisive action taken by physicians when consulted.

Concealed cancer, such as cancer of the stomach and womb, does not offer the same opportunities for prophylaxis as occurs in exposed situations. But even here the problem is not hopeless. Mayo reports 25 per cent. cures in cancer of the stomach. This is an excellent showing, but it must be remembered that a considerable per cent. of his cases were those in which the lesion was apparently ulcer, but microscopic examination revealed a beginning malignant hyperplasia.

Rodman is an advocate of pyloric resection for ulcer rather than simple gastro-enterostomy, claiming among other advantages that such a method removes a certain number of chronic ulcers already beginning malignant changes and prevents the development of cancer in the scars of healed ulcers. The added risk of resection compared to gastro-enterostomy in his hands has not been great. The interesting feature of this advanced position taken by leading surgeons is the recognition of the principles of prophylaxis in dealing with gastric cancer.

The intimate relation between gastric cancer and ulcer may be said to be an accepted surgical opinion in America, and if such be true, the gastric cancer problem becomes a gastric ulcer problem.

The greatest obstacle to the solution of this problem is the absence of efficient team work between the internist, the roentgenologist and the surgeon. Until such team work be available for a larger number of people, may we expect patients to drift through various stages of chronic ulcer invalidism to cancer and death.

Cancer of the womb is only less fatal than gastric cancer. The best statistics show from 25 per cent. to 48 per cent. of cures in the operable cases. While it it not concealed in the same sense that cancer of the stomach is, yet the wall which feminine modesty builds around disease of these organs in reality places them in the same class as concealed cancer.

This is a difficulty not easy to overcome, and calls for a degree of frankness and confidence that does not usually obtain. Here again the early symptoms of malignancy are insidious, and not different from the symptoms of trifling disorders. Like David Harum's dog which must have some fleas just to remind him that he is a dog, so menstrual disorders in women are regarded not only by themselves, but too often by physicians a necessary corollary to their sex. This attitude is most unfortunate, especially if held toward women between the ages of 40 and 55. Irregularities of menstrual function or a malodorous vaginal discharge have a significance at this age not possessed in younger life, and when patients complain of these symptoms a thorough examination is called for.

In conclusion it may be said that in the light of our present knowledge, the greatest hope for reducing cancer mortality lies not in the direction of improved remedies but in attacking the disease in its precancerous stage, thereby preventing rather than curing the disease.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association.* Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

The next session of the American Medical Association is to be held in Detroit some time in June, 1916. This means a large attendance from Indiana.

The Indiana State Board of Health received special commendation and a medal for its exhibition at the San Francisco session of the American Medical Association. Indiana generally gets to the front, and Dr. Hurty and his aggregation of helpers have given one more evidence of Indiana's way of doing things.

Dr. G. W. H. Kemper, pioneer physician of Muncie and one of the best known medical men in the state, will complete, on Aug. 19, 1915, a practice of fifty years of unbroken service in the city of Muncie—an enviable record indeed. On that date Dr. Kemper should receive calls and letters from his numerous friends over the state.

It is reported that the Indiana University has asked William Jennings Bryan to accept an $8,000 professorship in the University and to deliver a course of lectures on political economy.

Isn't this enough to stir up the wrath of some of our bright minds here in Indiana? Just to think of overlooking Beveridge, Kern, Watson, Fairbanks, Taggart, Hanley, and a number of others who are considered "some pumpkins" as lecturers! Perhaps the trustees of Indiana University think our Indiana men talk too much, but if they think that of Indiana men what about Bryan and his garrulous tongue?

The September number of The Journal will be known as "The Indianapolis Number." It will contain the final and complete program and all announcements for the next session of the Indiana State Medical Association. It will contain the committee reports, abstracts of papers, and much interesting information concerning the coming session of the Association. We hope to have the cooperation of all officers, essayists and others who have a part in the Indianapolis session, in getting the copy together on time so that The Journal will be in the hands of all members of the Association at least a week before the session.

A large percentage of cancer deaths can be prevented by early recognition of the symptoms and prompt recourse to competent surgical advice and treatment. The high cancer death rates in certain districts is due to the relatively high age distribution of the population. In certain localities the proportion of people over forty years of age, or at cancer age, to those under forty, and so less liable to cancer, is greater than other places. In these, as well as all other localities, the necessity for education of the public is indicated if the present mortality is to be reduced, and it is estimated that after the public is properly educated regarding early signs of the disease, and will act on this knowledge, the present mortality should be reduced at least half, and perhaps two thirds.

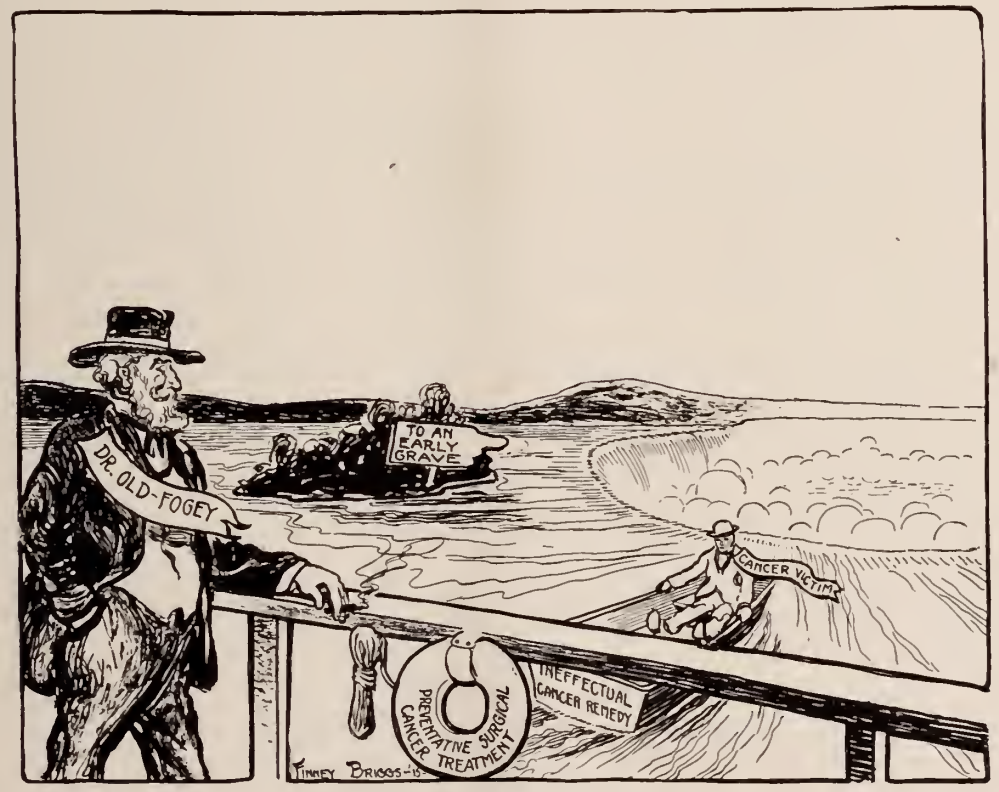
In his presidential address at the San Francisco session of the American Medical Association, Dr. Rodman took a crack at the unskilled surgeons of every community, and the practice of fee dividing which, until the last year or two, had been growing to an alarming extent. Dr. Rodman said that in every community men were operating who had no right to take human life into their hands. This did not apply to the general practitioner who, in an emergency and to the best of his ability, operated in an attempt to save life, but to those who, for gain, undertook that which should be done only by the skilful surgeon. He stated that surgery was a special science, extra hazardous in its nature, and hence the public had a right to demand in the surgeon the very highest physical, mental and moral equipment. Concerning fee splitting, he said it was an evil that had become intolerable, and a wave of protest was rising throughout the land which should and would overwhelm the offenders.

In his presidential address before the American Medical Association, Dr. Rodman described the plan for national licensure of medical graduates. According to this plan there will be a national board of medical examiners of which the surgeons general of the United States Army, Navy and Public Health Service, with representatives of the Federation of State Boards of Examiners, the Association of American Medical Colleges, the American College of Surgeons, and the American Medical Association will be members. This board will meet in Washington in October to examine such candidates as may present themselves. The man who succeeds in passing this examination will be fit to practice medicine in any state in the Union, but in order to make the plan effective it will be necessary for all the states to recognize certificates from this board. It is hoped that the plan will succeed, for the inconveniences and evils attending the varying standards of the state boards should be done away with.

The Christian Scientists are facing a very interesting question pertaining to eligibility for life insurance in certain substantial companies that require their prospective policyholders to be sufficiently broadminded to protect life and health by taking advantage of all the advances that have been made by medical science. In other words, the Christian Scientist who desires life insurance in certain companies is required to agree to procure competent medical skill in case of sickness or injury, and unless willing to do this he is classed as an undesirable insurance risk. This is quite in keeping with good common sense and we wonder that the matter has not been considered before this by those insurance companies that are looking for preferred risks. The deluded person who prefers to risk a diseased appendix to a Christian Science healer rather than to a skilful surgeon adds to his chances of being an unnecessary subject for a funeral, and well managed insurance companies are not looking for that kind of weak-minded policy holders.

An eastern dentist condemns the tooth brush as an instrument, not of personal hygiene, but of infection. He claims that the tooth brush fails to remove impurities, and that it serves as an efficient instrument to inoculate the teeth and gums with disease. In connection with his indictment of the tooth brush he calls on his fellow dentists and research workers to decide a technic for cleaning the oral cavity that shall be compatible with real oral hygiene. Until an approved plan can be adopted he advocates the use of some of the modern lotions for cleansing the mouth and teeth, without the use of the brush, to be followed by the recognized efficient silk-floss or strips which may be used to remove foreign matter from between the teeth. He emphatically condemns the tearing and rubbing on the gums and the teeth by a brush that is filthy with those very germs that we are so very anxious to rid the mouth of; and there is a good deal of truth in his contention that the ordinary tooth brush does not reach between the teeth where cleansing is most needed, and that much of the infection that is in the teeth and in the tooth brush is carried under the soft gums to the root of the teeth where decay starts earliest. As a matter of fact, the tooth brush is a filthy instrument which it is practically impossible to sterilize, and therefore it is a dangerous instrument.

This number of The Journal has been designated as "The Cancer Number" in view of the fact that our original articles and editorials all discuss various phases of the cancer question. This is in keeping with the movement to spread the knowledge of cancer prevention and cure, and indirectly stimulate the medical profession to its duty in educating the public concerning a disease, the mortality from which is much larger than it should be. Those who are interested in spreading information concerning the subject may obtain any amount of useful information by applying to the numerous organizations that are devoting their attention to the education of the medical profession and public concerning this great question. The American Society for the Control of Cancer, with headquarters at 289 4th Avenue, New York City, publishes a number of pamphlets covering various phases of the cancer question, and the small leaflet entitled "What You Should



"THROW OUT THE LIFE-LINE"

Know About Cancer" is a concise and easily understood statement which should have wide public distribution. The American Medical Association also distributes numerous pamphlets relating to cancer which furnish valuable information based on the latest knowledge. The medical profession should aid in spreading a nation-wide message concerning this common enemy of all mankind, for in the early treatment of cancer lies the hope of cure, and the public should understand this.

DEATHS

J. D. Bacon, M.D., of Cannelton died June 5, aged 83 years.

Mrs. Emily Zeller, wife of Dr. B. F. Zeller of Union City, died June 17.

E. P. Henry, M.D., died at his home in Andrews, June 5, aged 70 years.

Joseph Meeks, M.D., died at his home at Centerville, June 14, aged 62 years.

John Gants, M.D., died at the home of his son at Cromwell, June 2, aged 82 years.

William L. Breyfogle, M.D., formerly of New Albany, Ind., died June 15 at San Mateo, Calif., aged 66 years.

Isaac A. Wells, M.D., died at his home in Chalmers, June 15, from cancer of the stomach. He was 50 years of age.

Benjamin F. Stalker, M.D., pioneer physician of Clark County, died at his home at Borden, June 27, aged 70 years.

Asa A. Hamilton, M.D., passed away, June 26, at his home at Marion, aged 65 years. Dr. Hamilton was born in Philadelphia, Pa., graduated from the Indiana Medical College in 1872, was made assistant superintendent of Indianapolis City Hospital, and later located at Marion for the practice of medicine. He was a public-spirited man, active in the medical profession of the state and a member of the Grant County Medical Society, Ninth Councilor District and the Indiana State Medical Association.

William W. Kneale, M.D., of Anderson was stricken with apoplexy while at his office on June 7 and died a few hours later. Dr. Kneale was born in Attica, Ind., graduated from DePauw University, received his medical degree at University of Virginia, and took postgraduate work at Rush Medical College, Chicago. He began the practice of medicine at Anderson in 1888, has built up a large practice and his influence has been felt among the medical profession of the state. He was a member of the Indiana State Medical Association and held the office of president of the Madison County Medical Society at the time of his death.

Francis O. Dorsey, M.D., of Indianapolis died at the Methodist Hospital, June 17, from strangulation of the bowel. He was one of the best and most favorably known physicians in Indianapolis and prominent medical circles. Dr. Dorsey was born in Indianapolis, Nov. 12, 1869, graduated from the local schools and entered Yale University, from which he graduated in 1893. Soon afterward he entered the College of Physicians and Surgeons, medical department of Columbia University, New York, from which he received the degree of Doctor of Medicine in 1896; served a term as a member of the house staff of Sloane Maternity Hospital, New York; two years as intern in the Presbyterian Hospital, New York, and then returned to Indianapolis, where he was appointed Assistant Professor of Principles and Practice of Medicine in the Indiana Medical College, and assistant demonstrator in pathology from 1900 to 1907. In 1907 he was appointed Associate Professor of Medicine, which position he continued when the school was merged into the Indiana University School of Medicine. In 1900 Dr. Dorsey became connected with Dr. Henry Jameson in the practice of medicine, with whom he remained associated during his medical career. He was a member of the various medical societies of the State and American Medical Association.

Robert W. Long, M.D., of Indianapolis, founder of the Robert W. Long Hospital, and for many years prominently identified with the medical and surgical fraternity of Indianapolis and the state, died June 18, at the age of 71 years. Dr. Long was born at New Maysville, Dec. 11, 1843, and was the son of Dr. William Long, well-known pioneer physician of Indiana. His preliminary education was obtained in the common schools and at Franklin College (Indi-

ana). At the opening of the Civil War he enlisted, and after the close he began the study of medicine under the direction of his father. He entered Rush Medical College in 1864, and graduated from Jefferson Medical College, Philadelphia, in 1866. He became associated with his father in the practice of medicine at New Maysville, where he continued for ten years. In 1875 he located at Irvington, and moved his office to Indianapolis in 1890, where he continued to practice medicine until his health failed. His large fortune was accumulated through wise real estate deals, as he was a shrewd business man and an expert in real estate values.

Concerning Dr. Long, the *Indianapolis Star* of June 19 has the following to say:

The passing of Dr. Robert W. Long of Indianapolis means a loss to the city and state of a broad-minded, far-seeing philanthropic citizen—a man who lived not for himself alone.

When he came to think of the disposal of his wealth it was natural that, as a physician, he should incline with favor to the building of a hospital, knowing as he did the need of another institution of the kind (in Indianapolis). It was the outgrowth of his professional experience, too, that led him to see the need of a hospital open to the people of the state at large, where they might obtain expert medical and surgical service not available near their own homes on the same terms as city residents, and free if necessary.

It was with that idea in mind that he established the memorial hospital that bears his name, making it an adjunct to the State University School of Medicine, and thus giving all citizens an equal right to its privileges. . . . The good that Dr. Long did in founding this hospital will continue after him. It is a lasting benefit to the public and will bring many a blessing to his memory. And it means much to the community to have had such a man among its citizens. He set an example that has already been followed and that will not be forgotten.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Drs. T. B. Noble, John Thrasher and Garshwiler spent a couple of weeks in early June in Wisconsin fishing.

Dr. Frank Morrison and wife have gone East to be present at the graduation of their daughter from Vassar.

Dr. E. B. Mumford has been appointed by Mayor Bell to the City Board of Health, to take the place of Dr. Keene.

Dr. Edwin Knox and wife left home on June 6 for a trip to the West, including a short visit to the Panama Exposition.

Dr. Joseph Miller of Muncie, formerly of Indianapolis, suffered a fracture of the left leg while visiting in this city recently.

Dr. C. B. McCulloch, Dr. F. W. Foxworthy and Dr. L. D. Carter have moved their offices to Suite 1135 State Life Building, Indianapolis.

Mrs. Minnie Myers, who was assistant bacteriologist in the laboratories of the City Board of Health, Indianapolis, for seven years, died at the Methodist Hospital of peritonitis.

Dr. Oilar, who for the last year has been house physician at the Methodist Hospital, has been appointed by the Board of Health to the city dispensary service, filling the vacancy made by the resignation of Dr. Asher.

The City Board of Health and the Indiana Dental College have entered into a contract whereby the schoolchildren of Indianapolis whose parents are unable to pay for their dental work may receive such care from the college at the expense of the health board.

Dr. Charles S. Woods, formerly of Indianapolis, but for the last two years has been professor in the Iowa State College at Iowa City, has been elected secretary and superintendent of the Methodist Hospital, Indianapolis. He will take charge of his work about August 1.

Seldom has the death of one of its members so shocked the medical profession as has that of Dr. Frank Dorsey. Mentally and physically mature, and until his fatal illness in perfect health, no one seems able to adjust himself to the disaster.

The Woman's Improvement Club, Indianapolis, have started a campaign for colored tuberculosis patients. The fresh-air camp at Oak Hill was founded eleven years ago, and it represents practically all that is being done in the state for colored tuberculosis sufferers.

The county commissioners of Marion County have appropriated $12,000 for the purchase of 37 acres of ground near Oaklandon for the erection of a tuberculosis hospital. The

grounds are well located, and it is expected that the council will soon appropriate funds for the erection of the buildings.

At the recent meeting of the Indiana Institute of Homeopathy in Indianapolis, the following officers were elected: Dr. Albert A. Ogle, Indianapolis, president; Dr. Sollis Runnels, Indianapolis, first vice-president; Dr. E. A. Severinghaus, New Albany, second vice-president; Dr. John W. Webb, Indianapolis, secretary; Dr. J. F. S. Slabaugh, Napanee, treasurer.

The Indiana Eclectic Medical Association held its fifty-first annual session at the Denison Hotel, Indianapolis, May 11. The following officers were elected for the following year: Dr. George C. Porter, Linton, Ind., president; Dr. Henry Carter, Bringhurst, and Dr. W. W. Tindall, Shelbyville, vice-presidents; F. L. Hosman, Indianapolis, secretary; C. A. Tindall, Shelbyville, treasurer.

Dr. L. D. Waterman, Indianapolis, professor emeritus in the Indiana University School of Medicine, has made a gift of $100,000 to Indiana University to be available at the time of his death, on condition that the university appropriate an amount equal to the income from his gift. The entire proceeds are to be used for scientific research.

Dr. Herman G. Morgan, city sanitarian, Indianapolis, says that the only way citizens may be protected from tuberculosis is by having an institution for treatment of the sufferers. He declares that tuberculosis in Marion County is decidedly on the increase, and that the number of cases in 1915 will be larger than 1914, owing to the severe epidemic of la grippe, which disease always leaves the soil fertile for the growth of tubercle bacilli.

Severance Burrage, president of the Indiana Society for the Prevention of Tuberculosis, in an address before the Indianapolis Rotary Club, made some unfavorable comparisons between Indianapolis and other cities of the country in reference to the tuberculosis problem. Mr. Burrage said, despite the larger population and the accompanying increase of unfavorable conditions, New York, Baltimore, Boston, Philadelphia and Chicago each have a much lower comparative death rate from tuberculosis than Indianapolis.

The board of trustees of Indiana University announced the following changes in the teaching staff of the medical department at Indianapolis: Additions, Dr. A. B. Graham, clinical professor of proctology; Dr. G. W. Combs, associate in proctology; Dr. H. H. Wheeler, assistant professor of proctology; Dr. B. D. Turner, assistant professor of pharmacology; Dr. Fernandez, associate in pathology; Mrs. Ethel Clark, superintendent of nurses at the Robert W. Long Hospital. Resignations: Dr. H. C. Parker, Dr. Fletcher Hodges, Dr. Newcomb, and Miss Fitzgerald, formerly superintendent of nurses.

The last meeting of the faculty of the Indiana University Medical School was held Friday, June 18, at the college building. The work of the year was reviewed by Dean Emerson, who expressed himself as well satisfied with the manner in which the work of the school had been conducted during the past year. A larger degree of harmony he said had characterized the work of teachers, and plans were under way to systematize the courses so that there would be no overlapping of teaching. Progress is being made in the direction of a strong, centralized teaching force, which is necessary for the proper development of the school.

GENERAL

Dr. H. D. McCormick of Vincennes and Miss Anna Mail were married June 17.

Dr. George F. Keiper has been elected a member of the board of education of Lafayette.

Dr. E. L. Larkins of Terre Haute, who has been seriously ill for the past month, is rapidly improving.

Dr. James N. McCoy of Vincennes has recently been elected a member of the board of education of that city.

The next meeting of the Thirteenth District Medical Society will be held at Culver, Ind., Friday, Aug. 27, 1915.

Dr. Carl L. Souder of Columbia City has returned from a month's visit in the West, including San Francisco.

Dr. James T. Clark of Hammond was married June 22 at St. Joseph, Mich., to Miss Emma J. Evans of Hammond.

Dr. Harry B. Gudgel, who has practiced medicine at Hazleton for the past eleven years, has located at Princeton.

Dr. Fred L. Bunch of Muncie has been appointed physician for the Logansport division of the Pennsylvania Lines.

Dr. T. J. Toner of Gary was married in June to Miss Alma Hoffmeister of St. Louis. They spent their honeymoon in Wisconsin.

Dr. and Mrs. J. T. Paxton of Rushville are spending the month of July in the West, including Colorado Springs and Denver.

Dr. Henry Washburn of Clinton, who has been seriously ill and underwent an operation at Springfield, Ohio, is improving.

Dr. Carl Boardman of Gary was called to Beverly Hill, Calif., about the middle of June on account of the death of his mother.

Dr. U. G. Galloway of South Bend recently underwent a serious operation at the Epworth Hospital, South Bend. He is improving.

Dr. J. H. Richardson of North Vernon has purchased the practice of Dr. David N. Haydon of Vernon and has moved to that place.

Dr. Miles F. Porter of Fort Wayne has been elected a member of the American Surgical Association at a recent meeting of that society.

Dr. C. W. Fry has accepted the presidency of the Huntington Board of Health, to succeed Dr. W. F. Smith, whose resignation became effective July 1.

Dr. J. W. Anderson of Odon was operated on recently at the Methodist Hospital, Indianapolis, for the removal of a growth on the back of his neck.

A gift of $1,000 has been made by the late Herman Wiecking of Bluffton for the establishment of a hospital in Wells County to be located at Bluffton.

Margaret Phillip Church of Fort Wayne has been appointed to succeed Martha Elliott as a member of the Board of Registration and Examination of Nurses.

Dr. G. C. Boyer of Brazil has returned from New York City, where he has spent the past two months taking postgraduate work in diseases of the eye, ear, nose and throat.

Dr. G. H. Kamman and family of Seymour have recently returned from an Eastern trip through Philadelphia, Atlantic City, New York City and Washington, D. C.

Dr. A. P. Fitch of Crawfordsville has donated to the new Boone County Hospital one surgical chair and a case of surgical instruments. The gift is valued at $500.

Gary, Indiana Harbor and Valparaiso are the first three cities in Indiana to adopt the "all-time" health officer plan, and funds have been provided by the cities for this work.

Miss Minnie Lycan of Paris, Ill., succeeds Miss Julia Niemeyer as superintendent of the Daviess County Hospital. Miss Niemeyer is taking an extended tour through the West.

Dr. C. H. Good of Huntington attended the San Francisco session of the American Medical Association as a delegate from the Huntington County Medical Society. Mrs. Good accompanied him.

The Vigo County Medical Society has discontinued its regular meetings during the months of June, July and August, except the first one of each month, which is held on account of the social feature.

Dr. and Mrs. C. W. Corey of Hartford City left recently for an extended tour through the West. They will join an automobile party at Sacramento and motor through California, Nevada and other Western states.

A new ruling passed by Health Officer Ford of Cleveland requires that all glasses, dishes and spoons used in Cleveland soda fountains be sterilized each time they are used. The alternative course is individual paper cups and dishes.

Dr. and Mrs. Albert E. Bulson, Jr., son Eugene L. and daughter Miss Geraldine of Fort Wayne have returned from a vacation trip in the East. They motored through, visiting some of the larger Eastern cities, and spent ten days fishing at Battersea, Ontario.

The members of the Madison County Medical Society were entertained recently at a banquet given by the Meyer Brothers Drug Company in the new prescription department of their store in Anderson. The banquet followed the regular scientific meeting of this society.

The North Dakota Medical Association held its annual session May 12 and 13. Dr. H. V. Stickney of Dickinson was elected president; Dr. H. J. Rowe of Casselton, secretary; and Dr. W. F. Sihler of Devils Lake, treasurer. The meeting will convene in 1916 at Devils Lake.

Dr. E. W. Poinier, formerly of Andrews, Ind., after a nine months' service as assistant to Dr. William E. Schroeder, chief surgeon at Wesley Hospital, Chicago, has returned to Huntington and resumed practice, making a specialty of general surgery, gynecology and obstetrics.

Dr. McEwen Smith of Philadelphia was elected president of the American Laryngological, Rhinological and Otological Society at their recent meeting. The gold medal for research work was awarded to Dr. G. H. Cox of New York. The next meeting will be held in May, 1916, at White Sulphur Springs, Va.

Among the doctors and their families who attended the San Francisco session of the American Medical Association and are touring the West are Drs. Charles Wright of Huntington, G. G. Eckhart of Marion, H. W. McDonald of Newcastle, M. F. Gerrish of Seymour, L. A. Wilson of Michigan City, M. F. Porter of Fort Wayne, and W. D. Schwartz of Portland.

By the will of the late Dr. Robert W. Long of Indianapolis the bulk of his estate, estimated at $210,000, will eventually go to the Robert W. Long Hospital. The entire estate is bequeathed to his widow, and at her death about $30,000 in specific bequests will be paid, and the remainder of the estate will be placed in the hands of the trustees of Indiana University in trust for the hospital.

At the annual meeting of the North Carolina Medical Society held at Waynesboro, June 15 to 17, the following officers were elected for the coming year: president, Dr. M. H. Fletcher, Asheville; secretary, Dr. B. K. Hayes, Oxford; treasurer, Dr. W. M. Jones, Greensboro. The next meeting will be held at Durham, N. C.

The Florida legislature has just passed an act which provides for thorough examination of all schoolchildren of the state, including the rural schools, under the direction of the State Board of Health. The bill also provides for a sanitary survey of all school buildings and surroundings. This bill was drawn up by Dr. Oliver J. Miller, city health officer of Sanford, Fla., and its passage is due in a large measure to his efforts.

Up to June 1 the city of Los Angeles, Calif., had but one municipal tuberculosis nurse for the entire city, but at the city election of June 1 an initiative ordinance was passed, by a vote of two to one, providing for the employment of municipal visiting tuberculosis nurses in the proportion of one such nurse per 100 reported cases of tuberculosis in that city. This ordinance was drawn and fathered by Dr. George E. Malsbary, editor of the *Southern California Practitioner*.

At a recent conference attended by 200 Indiana health officers, a resolution was adopted unanimously declaring that health officers and physicians should join in the campaign against alcohol. As a matter of fact, health officials in many states are already engaged in efforts to combat intemperance by educational means, justifying their activies in this field by the following assertions: A diminution in the consumption of alcohol by the community would mean less tuberculosis, less poverty, less dependency and less pressure on our hospitals, asylums and jails. Intemperate drinking cuts into the support of the family. The drinking of parents weakens the vitality of children. Drinking mothers lose twice as many babies as do sober mothers. More alcoholism is found in the parents of feebleminded children than in the parents of normal children. The children of drinkers develop more slowly and do poorer school work than the children of abstainers. Alcohol impairs the tone of the muscles, lessens the product of laborers, depreciates the skill and endurance of artisans, impairs memory, multiplies industrial accidents, causes chronic disease of the heart, liver, stomach and kidneys, increases the death rate from pneumonia and lessens natural immunity to infectious diseases.—*New York Medical Journal*, June 26, 1915.

SOCIETY PROCEEDINGS

THE INDIANA STATE MEDICAL ASSOCIATION

MEMBERS REINSTATED DURING JUNE

A. A. Williamson..... Marshall ..Parke-Vermillion
M. F. Woodard.....Bloomingdale.
H. W. Gante.....Anderson .....Madison
R. S. White.....Laud .....Whitley
J. E. Bickel.....Fort Wayne.....Allen
G. D. Baker.....Crandall .....Harrison
K. K. Straughan.....Waveland .....Montgomery
R. R. Pollom.....Darlington
A. G. Pohlman.....St. Louis, Mo.....Monroe
Walter McBeth.....Burnettsville .....White
A. G. Shauck.....Arlington .....Rush
B. M. Jewell.....Hammond .....Lake
H. C. Groman.....Hammond.
L. H. Kelly.....Hammond.
J. M. Pulliam.....Fort Wayne .....Allen
G. S. Rowe.....Indianapolis .....Marion

FOURTH DISTRICT

The eleventh annual meeting of the Fourth Councilor District was held in German Lutheran Club Building, Seymour, Ind., May 20, 1915.

Meeting was called to order at 11 a. m. by the retiring president, Dr. W. E. Thomas, of Clarksburg, who, after a few brief words, introduced the new president, Dr. D. E. Johnston, of Moores Hill.

Dr. Johnston delivered an excellent address, dealing with hygiene and sanitation. He pointed out that a great deal of good had already been accomplished and that our efforts in the future should be directed by the knowledge of our past experiences. He advocated the full-time, well-paid health officer, and he ventured to say that it will come to that before many years. The address made a good impression on the society.

Adjournment for noon then followed, during which a buffet luncheon was served to the members and their wives and friends in the club house assembly rooms. During the noon intermission a number of physicians took advantage of the opportunity of visiting the beautiful Schenck Memorial Hospital.

The association convened again at 1:45 p. m. and a paper on "Pellagra" was read by Dr. Thyra Josselyn of Madison. The paper was excellent, dealing with the subject fully. The writer stated that this disease was more prevalent than suspected, and that the disease is seldom diagnosed before skin symptoms appear. Many cases last for years. Treatment should be much like treatment of tuberculosis. Feed them carefully those things that they can eat and digest. Do not feed them crystallized sugar as experiments on dogs have shown it to be a causative factor. Corn syrup, used so much in all our state institutions, may be a causative factor. The various forms of arsenical compounds have thus far been found to be best in treatment along drug lines.

A paper entitled "Modern Therapeutics" was read by Dr. A. G. Osterman of Seymour. He dealt with the advances of the last two years, speaking of emetin in pyorrhea alveolaris, in dysentery, and even in other diseases, and how it had revolutionized the treatment of each. The doctor's experience with cacodylate of sodium—one of the newer preparations of arsenic—had simply been marvelous in preventing and curing of smallpox—even preventing the "taking" of vaccination. The essayist strongly advocated the trying-out of this remedy by all physicians to see if others would obtain same results. Other newer remedies were also spoken of by him. The association, by a unanimous vote, referred this paper to the Committee on Scientific Work of the State Medical Association, to be read at the next meeting in September, 1915.

Dr. C. E. Holton of Holton, Ind., read a paper entitled "Some Problems of a Physician," in which he recounted a few of the many that confronts us—especially how easy it is to overrate our services in the eyes of the patient, and to underrate that of a fellow practitioner. Paper was well received and freely discussed.

The House of Delegates reported the election of the following officers for next year: president, Dr. J. H. Green, North Vernon; vice president, Dr. E. U. Wood, Columbus; secretary, Dr. F. M. Mueller, Lawrenceburg; treasurer, Dr. H. H. Sutton, Aurora.

The Committee on Necrology reported appropriate resolutions on the deaths of Drs. H. R. Luckey of Seymour; L. Ruddick, Seymour; and S. D. Adams, Brewersville (members), that occurred during the past year.

At 7 p. m. a banquet was held in the club house auditorium at which ninety-four people were served. Dr. L. B. Hill was toastmaster, and the following toasts were responded to: "The Bachelor Doctor," Dr. A. May; "Common Sense in Medicine," Dr. W. H. Stemm; "Past Presidents," Dr. E. D. Freeman; "Fellowship," Dr. A. G. Osterman.

A vote of thanks was extended for the use of the Lutheran Club Building and to the members of the arrangements committee.

Aurora was selected for place of meeting next May.

Adjourned. G. H. Kamman, Sec.

NINTH DISTRICT

Annual meeting of Ninth Councilor District of the State Medical Association was held at Lebanon, May 20, 1915.

House of Delegates convened in regular session at 11 a. m. at convention hall in Boone County Courthouse. The meeting was called to order by President J. R. Ball, with the following delegates present: Boone County, Dr. H. A. Beck; Hamilton County, Dr. L. J. Baldwin; Tipton County, no representative; Howard County, Dr. Will Martin; Tippecanoe County, no representative; Clinton County, Dr. C. A. Endicott; Fountain-Warren counties, Dr. J. R. Burlington; Montgomery County, Dr. S. L. Ensminger.

Minutes of previous meeting were read and approved and the House proceeded to election of officers for the ensuing year. The following officers: President, K. C. Hershey, Clinton, Ind.; first vice president, J. R. Burlington, Attica, Ind.; second vice

president, N. C. Hamilton, Kokomo, Ind.; secretary-treasurer, Fred A. Dennis, Crawfordsville, Ind.; assistant secretary, S. L. Ensminger, Crawfordsville, Ind., were nominated and unanimously elected for the ensuing year.

The secretary reported receipts of the session to be $32.37, expenditures $26.97, leaving a balance in treasury of $5.40. On motion of Dr. Tucker of Hamilton County, a warrant was ordered drawn for $26.97 to meet expenses of session.

An invitation from the Montgomery County Society that our next annual meeting be held at Crawfordsville was duly accepted and the House of Delegates adjourned.

At 1 p. m. the scientific section convened in the convention hall and the following program was carried out:

Address, Dr. J. R. Ball, Lebanon.

"The Diagnosis of Functional from Organic Diseases of the Nervous System," Dr. Hugh Patrick, Chicago. Discussion, Drs. Stearns, Neu and Moffett.

"My Experience with Anoci Association," Dr. Edward Clark, Indianapolis. Discussion general.

"Otitis Media," Dr. Will J. Martin, Kokomo. Discussion, Dr. H. E. Greene, Crawfordsville; Dr. J. H. Black, Lebanon.

"Typhoid Prophylaxis," Dr. H. H. Thompson, Noblesville. Discussion, Dr. T. W. Kelsey, Attica; Dr. Andrew S. Dickey, Tipton.

"Rabies; Nature, Restriction and Prevention," Prof. C A. Behrens, Lafayette; read by Dr. Kerns. Discussion general.

"Report of Twelve Cesarean Sections," Dr. Paul J. Barcus, Crawfordsville. Discussion, Drs. Pfaff, Alexander and Williams.

At 6:30 p. m. the ladies of the Methodist Church served a banquet for the visiting physicians.

Adjourned.

J. R. Ball, Pres.
Fred A. Dennis, Sec.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of May 28, 1915

Regular meeting of Muncie Academy of Medicine was held in Muncie Y. M. C. A. building, and was called to order at 8:15 by President O. E. Spurgeon, M.D.

Dr. B. R. Kirklin read a paper dealing with "Acute Dilatation of the Stomach," particularly as a complication of surgical convalescence. The etiology is not well understood; in the great majority of fatal cases no cause was found at necropsy, but errors in diet are known to have been responsible for this condition. The true explanation seems to be, first, a paralysis of the stomach favoring overdistention with gas and excessive secretion, which in turn leads to kinking at the pylorus or at the duodenojejunal flexure. Symptoms are those of collapse, vomiting of enormous amounts of fluid, pain and pressure, respiration frequent and shallow, pulse rapid, countenance pinched, great thirst, patient is restless and weary, urine scanty or secretion entirely abolished. The fluid reaccumulates fast as vomited, the pylorus being in a state of spasmodic closure. Inspection will reveal distention of the epigastrium; even the outlines of the inflated stomach may be marked. Treatment calls for prompt evacuation of the stomach by means of the tube, followed by lavage at frequent intervals, not waiting for vomiting to occur. Fluids should be given by rectum or subcutaneously. The patient should lie on his right side. Drugs are of little use. Adrenalin is indicated in collapse. Operative measures are contraindicated. Prognosis in the past has been bad, nearly 70 per cent. ending fatally. Early recognition of the prodromal symptoms and prophylactic treatment will give a much better outlook.

A paper on "Chronic Dilatation of the Stomach" was read by Dr. J. C. Quick. Dilatation of stomach means that form of gastric disturbance in which stomach is unable to empty itself, with resulting stagnation of food. The expression "dilatation of the stomach" refers only to the symptoms of disease, rather than to disease per se. Obstruction anywhere along the alimentary canal is likely to cause dilatation. I saw one case where the obstruction was in the sigmoid flexure. Since a large stomach is not necessarily a diseased stomach we might better use the term "gastric insufficiency" of the first or second degree. The mechanical causes of actual dilatation of the stomach are divided into two groups: organic and functional. They may be from within, such as cicatricial contraction of the pylorus following ulcer; or from without, adhesions with pancreas, liver, anterior wall of abdomen, etc. The second group includes spasm of the pylorus, inflammation of the pylorus or of any organs near stomach outlet. In treatment there are two points to consider: To promote emptying of stomach and to prevent fermentation. The abdominal bandage is excellent. Keep down excessive hyperacidity. Have patient lie on right side and employ gentle massage toward pylorus.

In discussing the papers, Dr. D. M. Green said: The chief types of acute dilatation of stomach seen by the internist in unoperated cases are those caused (1) by partial paresis of stomach wall, and (2) by pyloric spasm. Under the first group come those cases which are brought about chiefly by the intoxications, autotoxemia, bacterial and chemical poisoning. The second type, that caused by pyloric spasm, is usually of reflex origin. It may be induced by an intense gastric fermentation, inhibiting normal action of pylorus in the presence of gastric contents, and to reflexly intensify competency into an actual spasmodic stenosis. Gastric fermentation does not mean a lack of hydrochloric acid. Pyloric spasm is occasioned, often by chronic inflammatory processes in the digestive tract outside the stomach. Chronic appendicitis is a frequent cause. I have recently observed, on the operating table, a true pyloric spasm take place in the stomach of a patient whose clinical symptoms had been of chronic appendicitis plus short, sharp attacks of pain in the right hypochondrium at irregular intervals, usually after the taking of food. Laparotomy revealed a chronically inflamed appendix, a normal gallbladder and a stomach normal in appearance, but which, under observation, gave a peristaltic wave terminating in an

intense pyloric contraction lasting approximately as long as had the sharp attacks of pain previously described by the patient. Removal of the appendix in this case resulted in relief of these painful seizures.

Adjourned. H. D. Fair, Sec.

Meeting of June 11, 1915

Dr. W. W. Wadsworth read a paper on "The Sensory and Secretory Neuroses of the Stomach," saying: Under the head of gastric neuroses we have a great variety of manifestations ranging in subjects from the glutton to the gastopath with an anorexia. There is a difference between hunger and appetite. The former implies an organic need, and the latter expresses a psychic idea of nourishment. Hunger is natural; appetite may be cultivated, stimulated or suppressed. All phases of digestion may be influenced by neuropathic phenomena. When subjective symptoms do not tally with the objective evidence it is safe to assume that the patient is a victim of neuroses. That anatomic changes lie at the foundation or constitute the cause of gastric neuroses is disputed by many. Secretory change arising from gastric neuroses may be manifested in hepatic and renal disturbances. Proper beginning of the digestive process includes the pleasing of the psychic as well as the palate. The part played by the emotions is truly great. The inhibitory action of excitement or anger is well known. Pain interferes with digestion, and produces what is known as nervous dyspepsia. What is true of emotions is also true of other mental and physical states, as obsessions, preoccupations and abstractions.

Dr. Poland read a paper entitled "Motor Neuroses of the Stomach." These are found most frequently in those who have inherited a nervous constitution or are indiscreet in their habits. Gastric symptoms may have a reflex origin depending on organic disturbances in remote parts of the body. Under the term motor neuroses may be included (1) supermotility, allowing a too early discharge of the stomach contents; (2) peristaltic unrest, which is frequent in neurasthenia; the peristaltic wave may, in some instances, be reversed; (3) nervous eructations, which may or may not depend on mental excitement; the origin of gas is not always easily determined; (4) nervous vomiting, due to nervous influences acting either directly or indirectly on the centers presiding over the mechanism of vomiting; frequently found in hysterical women. Preliminary nausea is often absent. Even after protracted spells nutrition may not be impaired; on the other hand, it may prove to be a serious matter.

Adjourned. H. D. Fair, Sec.

Meeting of June 18, 1915

Dr. C. M. Mix read a paper on "Carcinoma of the Stomach." Diagnosis is difficult and often made too late to afford opportunity for effective surgical relief. Early symptoms may be so trifling that patient is not alarmed, and signs so indefinite that careful physician fails to recognize this dreadful disease, but the only hope is in early diagnosis. Medical treatment is prophylactic and palliative. Pain is one of the most prominent symptoms and is generally constant in varying degrees; loss of appetite is common. The attitude and appearance of the patient are often strongly indicative of gastric carcinoma. The pain is not localized as in ulcer. Only when inflammatory conditions involve the peritoneum do we get local tenderness. Vomiting is not an early symptom, but follows the progress of the disease. Relief may follow, but for a short time only. Vomitus may be rancid or foul and contain mucus and blood. Gas is characteristic of cancer of the stomach, but is not differential. Weakness, almost to prostration, is common. Exercise is badly borne. Emaciation comes on rapidly, then follows mental depression, absence of acids and a steady downward course. After all, no matter what history and symptoms may indicate, patient must look the part or we have reasonable room to doubt diagnosis of gastric carcinoma.

Dr. F. W. Dunn read a paper on "Examination of Stomach Contents." The amount of ingested matter found at a given time depends on the motor power and presence or nonexistence of pyloric stenosis. Small hemorrhages occurring early may not affect the general appearance, but in advanced cases, because of gross admixture of blood, contents may present color of weak coffee. Clinical discovery of blood in feces is significant of carcinoma. In most cases examination reveals absence of free hydrochloric acid, but not necessarily when the malignancy has started on the base of an old ulcer. However, anachlorhydria may occur in other conditions, and must be considered in connection with other symptoms. Irregularity of the secretion of hydrochloric acid in a patient within the cancer age should excite suspicion. All gastric ferments will also be diminished. In noncancerous cases the appearance of lactic acid in notable amounts is rare, but in cancer it may be found in large amounts, even in early stages of the disease.

Adjourned. H. D. Fair, Sec.

FORT WAYNE MEDICAL SOCIETY

Meeting of April 6, 1915

The Fort Wayne Medical Society met in regular session in the assembly room of the court house, April 6, 1915. Fifteen members present. Meeting called to order by the president. Minutes of two preceding meetings read and approved as read.

No clinical cases.

Discussion of Dr. Porter's paper of one week ago was then taken up. This discussion was postponed until this meeting because the essayist was called away before the discussion of his paper.

Dr. B. Van Sweringen: The point made by the essayist that a diagnosis of sarcoma was not sufficient and that other conditions influenced that diagnosis to a great extent was and are new phases of this question.

Dr. Porter here gave the following résumé of the conclusions arrived at a week ago: That the diagnosis of sarcoma without qualification was not sufficient, inadequate and dangerous, in that such a diagnosis might lead to the useless sacrifice of a limb when a non-mutilating operation might better be done. I believe one should know the predominating cell of the

tumor, for it is one of the determining factors as regards the malignancy of the growth, i. e., spindle celled sarcoma of the ovary for instance is less malignant than other varieties of sarcoma, such as spindle cells in a mole gives the most rapid growth. The amount of pigmentation present is also important, for the more pigment, the more malignant the growth and the less likely is any operative interference to be of service. The rapidity of the growth should be taken into consideration also, for a tumor which has not increased in size suddenly, takes on rapid growth, is a factor of great importance in the diagnosis. The history of trauma in connection with sarcomatous growths is a very important point. We have much progress in the treatment of sarcoma of bones, especially is the work of Bloodgood to be remembered in this connection.

Dr. Weaver: I have been watching a case for one and one-half years illustrating metastasis in the glands of the neck. This growth originated in the back, in the region of the scapula. Recurrence took place within three weeks following the operation for its removal. Some glands occurred in the axilla and disappeared under Roentgen ray. Some glands also occurred along the saphenous opening which also disappeared under the Roentgen ray.

Dr. B. Van Sweringen gave the history of the following case illustrating the rapidity with which the melanotic sarcomas grow: Male 33 years of age, congenital mole below the internal malleolus; received an injury to the right foot from falling on sheet iron; at the time this injury was dressed the mole was removed under local anesthetic. This wound never healed. A year later a large mass developed in the right groin. A few months later several masses on the left ankle occurred. Following this with great rapidity, multiple growths occurred over almost the entire skin surface. Five years from the date of the operation for the removal of the pigmented mole, the patient developed a metastatic growth in the wall of the ileum producing a volvulus and an intussusception necessitating operation for the obstruction which ensued. Resection of gangrenous bowel was made with a Murphy button. From this time on the development of metastasis was extremely rapid. The patient died the usual malignant disease death.

Postmortem revealed the peritoneum and the peritoneal surface of the bowel practically covered with the melanotic growth.

Dr. Weaver read the paper of the evening entitled "Some Surgical Disorders of the Upper End of the Femur," and exhibited a number of Roentgen ray plates.

* Development of study of diseases of bones and joints has not kept pace with modern progressive medicine. The reason for this has been lack of team work between clinician and various laboratory workers and specialists. Clinical experience has been the guide to treatment in the past without sufficient detailed study. Present opportunities impose greater responsibility on modern clinicians. Results of Ely's laboratory study of 120 specimens summarized and his conclusions given. In all bone and joint diseases, active part is taken by (1) the two kinds of marrow, (2) the synovia, and (3) the inner layer of the periosteum, cartilage and ligament remaining but passive structures. Various diseases show predilection for certain of these structures, and some, as tuberculosis and pus infections, may involve all three.

Paper took up only three or four subjects: (1) tuberculosis of the hip, with a report of case and illustrated by skiagrams; (2) hypertrophic osteoarthritis of the hip, with the illustration by both skiagram and specimen; (3) malignancy, in particular metastatic carcinoma of the femoral neck, with skiagram and specimen of case. Lastly, two points were mentioned in regard to fractures of the femur, namely, one as to diagnostic skiagraphy and the other concerning a point of treatment. In radiographing the femoral neck care must be taken that it is absolutely horizontal, in order to avoid apparent shortening and projection of greater trochanter on to neck. Mention made of mistaken Roentgen ray diagnosis because of such distortion. Abduction treatment without traction not always sufficient and case cited illustrating lack of union and shortening one year after abduction treatment alone.

I have very little use for the metallic bone plate because it produces suppuration, has to be removed and too often non-union results from its use. The intermedullary splint seems to be the best method of treatment of this case. Not infrequently in spite of all methods of treatment of fractures, non-union will result and no one knows why. Given absolutely perfect apposition, with or without the intermedullary splint, you will have absorption of the ends of the fragments and shortening will result. Extension will overcome some of this trouble. Extension which places these muscles on an over stretch for a considerable length of time will favor delayed union because of the gap produced being so great that bone tissue is slow in filling it up. Regarding the treatment of so-called intercapsular fracture, I believe that these cases are best treated by a reasonable amount of extension and the use of sand bags with a girdle about the hip. I have a number of people here who are able to walk without much if any limp following an intercapsular fracture treated in this manner. More use should be made of the fracture bed and a skiagram should be made with the patient on this bed. The handling of a patient following fractures of this nature is often times responsible for the bad result obtained. I do not believe that we ever have impacted fractures of the hip joint.

Dr. Weaver (closing): We know that with any method of treatment of fractures we are bound to have non-union. The intermedullary splint prevents just the thing that Dr. Porter talks about, i. e., that the splint forms a bridge for the formation of this bony union. Operation for acute tuberculosis of the hip joint should not be done. Many tuberculous hip joints which have ankylosed can be made movable by arthroplasty. I am certain that many fractures are impacted. I know that there are many Colles fractures which are impacted and reduction is impossible without breaking up this impaction.

* Abstract of paper read before the Fort Wayne Medical Society, April 6, 1915, by B. P. Weaver.

DISCUSSION

Dr. M. F. Porter: I am in accord with practically everything the essayist has said.

Communication of Dr. A. L. Reed of Cincinnati, Ohio, read. This communication was an invitation for the Fort Wayne Medical Society to become a member of the Seventh Pan American Medical Congress which is meeting in San Francisco beginning June 17, 1915.

Motion made and carried that the secretary acknowledge the receipt of this communication of Dr. Reed. Motion carried that the Fort Wayne Medical Society donate $25 to the Belgian Physicians' Relief Fund.

Adjourned.

Meeting of April 13, 1915

The Fort Wayne Medical Society met in regular session at St. Joseph's Hospital, April 13, 1915, with thirty-three members present. Meeting called to order by Dr. Morgan, president *pro tem.* Minutes of preceding meeting read and approved as read.

Clinical case night in charge of Dr. M. I. Rosenthal.

Dr. Rosenthal presented the following cases:

Case 1.—Male; father died of apoplexy at the age of 54 years; mother living at the age of 51 years; operated for gall stones twelve years ago; passed intestinal worms six months ago; shortly after this had a spell of intense nausea, vomiting blood; dark colored stools; at times felt perfectly well; at times had a painful spot at about the region of the gall bladder; bismuth meal; Roentgen ray showed an immensely dilated stomach and in one hour there was no bismuth in the bowel. Following this meal had a number of gastric hemorrhages. Diagnosis of ulcer with stenosis of pylorus made. Gastroenterostomy done. The immense dilation of the stomach was due to duodenal obstruction.

Case 2.—Pyloric obstruction; operated two years years ago; Roentgen ray plate of stomach exhibited; one and one-half hours after bismuth meal very little bismuth in bowel; second operation done for the purpose of repair of previous gastroenterostomy the opening of which had become closed, and engrafted on the gastroenterostomy opening was an ulcer. The stomach had drawn away from the bowel sufficient to produce quite a little tube. The previous gastroenterostomy opening was contracted; the operation consisted of opening the stomach, enlarging the opening and proceeding as in primary gastroenterostomy.

Case 3.—Exhibited Roentgen ray plate and gave history of gastric disturbance. Picture was taken one and one-half hours after bismuth meal; very little bismuth in the bowel. This case shows almost complete stenosis of the pylorus; patient has a positive Wassermann; presents tumor which is sharply outlined in the epigastrium; no glandular involvement; at the time of operation patient was in very serious condition because of increased hemorrhage; Murphy drop of nutriant enemata solution was given following operation; patient has gained from one to one and one-half pounds daily; diagnosis is gumma of pylorus; he has had several intravenous injections of 606 and is now receiving mercury.

Case 4.—Case history of a patient with advanced carcinoma of the stomach. Glands in the neighborhood of the growth showed considerable metastasis; excised stomach down to the ducts of the liver and pancreas; pancreatic fistula followed operation; finally healed up; no return.

Case 5.—Exhibited patient and Roentgen ray plates in a case of obstruction of the pylorus; vomiting of food has been almost continuous for six weeks; no blood in the stool; operated for the purpose of doing gastroenterostomy; found a malignancy in the jejunum in the location as indicated in the Roentgen ray picture. Some glandular involvement; an anastomosis of the bowel was made above and below this growth.

Case 6.—Exhibited patient who had been operated on for a ruptured appendix with a general peritonitis. This condition followed whooping cough; there were no adhesions; abdomen rapidly opened; drainage established and ether was poured into the abdominal cavity down the drainage tube and the dressing was saturated with ether. Ether was used each time a change of dressing was made. The wound looks smooth and the result is perfect.

Case 7.—Case history and Roentgen-ray plate exhibited of a case of visceroptosis; Roentgen ray shows the stomach lying on the iliac crest; operation was made and a gastropexy was done; in this Roentgen ray, taken five weeks following the operation, the stomach is seen being retained in its proper position.

Case 8.—Exhibited patient fifteen days following operation for ruptured appendix. This case was also dressed with ether and ether was poured in the abdominal cavity at the time of the operation. The drainage has been removed to-day. The wound is very clean and healing nicely. Exhibited two cases of appendices; one of which contains an immense fecal stone; is one of the largest appendices which Dr. Rosenthal has seen. Specimen exhibited and case history given of a case of polycystic kidney occurring in one-half of a horseshoe kidney; patient made an uneventful recovery. Exhibited specimen of tuberculous kidney.

Cases 9 and 10.—Were both cases of suppurative peritonitis which had been operated and dressed with the ether dressing. Exhibited excised scar from an abdominal wound made for the purpose of excision of a carcinoma of the bowel. This is not a recurrence of a type of which we usually speak, but is an implantation carcinoma, implanted in the scar.

Case 11.—Case history given and specimen exhibited of a resection of the inferior maxilla with glands, which were removed by the electrocautery. Four months following this operation this patient does not show a recurrence.

Case 12.—Exhibited specimen of fibroid uterus and gave a point in surgical technic in the operation for its removal. In the old Doyen operation in delivery of the fibroid mass, the veins in the broad ligaments were put on a stretch, thus injuring them, producing a separation of the intima of the vessels and portions of these clots are washed off in the blood stream and produces pulmonary thrombosis.

Case 13.—Exhibited a case of a boy upon whom a craniotomy was done for the relief of epilepsy.

This epilepsy is the result of destruction of the brain due to an inherited syphilis, which has been treated for a number of years. Both spinal fluid and blood gave a negative Wassermann reaction. On operation found a non-pulsating dura and a brain which appeared waterlogged. There were no firm adhesions of the dura. Those that were present were of a spider web variety and pealed away easily. When torn loose a gush of fluid occurred and the brain, which was bulging, collapsed and became pulsating. Horsehair drainage was used.

DISCUSSION

Dr. Edlavitch: I want to disagree with Dr. Rosenthal in the statement that there is no such thing as a recurrence of a malignant growth. So far as the cancer of the uterus and breast go, I think with him, that we have implanted it in the wound or failed to remove it completely, but in sarcoma, for instance, which is incapsulated and is removed entirely and we have been on the outside of the capsule, we are pretty firmly convinced that the growth has been completely removed, and when a growth occurs in the operative area, that surely is a recurrence.

Dr. Rosenthal: I suppose recurrence of a carcinoma does occur, for instance, a cancer growing in the incision in the vault of the vagina is a recurrence.

Communication of Dr. Studer relative to the sale of his office fixtures and equipment read. Communication acknowledging the receipt of the $25 donation for the aid of the Belgian physicians by the Fort Wayne Medical Society read and is as follows:

Dr. G. Van Sweringen, Secretary, 633 West Wayne Street, Fort Wayne, Ind.

Deor Doctor:—I am in receipt of your letter enclosing check for $25 from the Fort Wayne Medical Society, and on behalf of the Committee of American Physicians for the Aid of the Belgian Profession, I wish to thank you and the other members of the society for your generous contribution to the fund for our stricken confreres.

Fraternally yours,

April 12, 1915. L. L. Simpson, Treasurer.

Receipt enclosed.

Application of Dr. Edward Mendenhall presented and referred to the board of censors.

Society adjourned to luncheon, which was served by the sisters.

Meeting of April 20, 1915

Society met in regular session in the assembly room of the court house. Meeting called to order by the president. Minutes of preceding meeting read and approved as read.

CLINICAL CASES

Dr. G. Van Sweringen: H. G. O., male; 33 years of age; family history negative; personal history negative; five weeks ago began with a chill, sudden rise in temperature, vomiting, constipation. The usual treatment for the relief of intestinal stasis was used; temperature continued in a regular typhoid course; eighth day rose spots appeared; positive Widal; normal blood count; four weeks from time of onset convalescence was established. He was sent home from the hospital. One month from the day that the temperature became normal, he was taken with a severe rigor; some tenderness in the gall-bladder region; constipation; vomiting; temperature 103 F.; positive Widal; no increase in leukocytes; on the fifth day following the onset of this disease rose spots appeared and the case continued through four more weeks of typical typhoid infection; the convalescence from the second attack was not as rapid as from the first; the gain in weight was very slow and the weakness was intense; every other examination was negative; at the present time the patient's condition is satisfactory and he is gradually returning to health. I report this case for two reasons: First, because of the length of time intervening (one month) from the time of the subsidence of his previous attack to the time of the onset of the present one; second, because the case presents the type of case which can be called a recurrence and not a relapse.

DISCUSSION

Dr. Rhamy: The fact of the recurrence in this case led me to believe that it might be a paratyphoid infection. Paratyphoid examinations were negative.

Dr. M. F. Porter: This case is an example of Wharthin's theory that the acute infections are never cured but remain within the individual. Wharthin has been very much interested in the study of the direct transmission of spirochaetes in the cardiac muscle of the fetus. He has also found them in the heart muscles of infants.

Dr. M. F. Porter, Jr.: This is purely a question in terminology. There can be no distinction between relapse and reinfection because the source of the infection cannot be proved. The term recurrence should be used here.

Dr. A. E. Bulson, Jr.: Case History No. 1.—A child with repeated attacks of epistaxis; thought that there might be some growth in the nose or pharynx; enlarged tonsils and adenoids present; blood and urine negative; following morning temperature was 104 F.; examination of the child was negative; temperature stayed up until three or four days had passed; suppuration of the middle ear was suggested but nothing was found; finally a blood count revealed 23,000 leukocytes; there was a slight blush on one membrane; this tympanum was incised and a little serum discharged; right ear, no pus followed; tonsils and adenoids were removed and a postoperative recovery was uninterrupted.

Case History No. 2.—Male; 76 years of age; operation for senile cataract; within an hour following the operation he got out of bed and developed delirium; morphin slightly quieted the patient; the disturbance seemed to subside following the removal of the bandage.

Dr. Morgan: Case History.—Girl; well nourished; 10 years of age; diagnosis of mumps made; recovery from this condition; child complained of considerable pain on swallowing; temperature at no time was high; three days after my visits ceased I was called because of a hemorrhage from the mouth; there was no indication in the throat of the bleeding point; I was called back again the next day because of another hemorrhage from the mouth; I did not then hear from the case again for several days when I was

called in a great hurry; the child looked as if she had had a severe hemorrhage; could not find the bleeding point at this time; nurse was instructed to watch closely and to make pressure on tonsil regions with gauze. Dr. Bulson saw the case with me at this time; within an hour following our visit she had a very severe hemorrhage from the throat and died from its effect; after death an opening was found high up in the pharynx which undoubtedly opened the internal carotid; the patient bled to death from this opening.

Dr. Bulson: When first seen by me there was a streak of blood behind the right tonsil, but no active hemorrhage, and owing to the condition of the patient she was not disturbed by exhaustive examination. After the uvula and the soft palate were drawn up, following the death of the patient, the opening in the posterior pharyngeal wall was plainly discernible. There was no clot hanging down from the posterior wall. I was able to introduce a curved hemostatic forceps into the opening only.

Dr. M. F. Porter: The important thing in this case is that since we had a hemorrhage from a large vessel and that it was going to bleed again, it seems to me that no matter how near death the child was, it would have been wise to attempt to stop hemorrhage.

Dr. M. F. Porter, Jr.: I think it was impossible for any such hemorrhage to have occurred from the internal carotid, because of the length of time the hemorrhage had lasted. In the erosion of a vessel of this size, the hemorrhage would have been fatal sooner. It could very easily have come from some of the branches of the external carotid.

Dr. A. E. Bulson, Jr.: I believe, the more I think of it, that this condition could have occurred from a post pharyngeal abscess and erosion of some of the vertebral vessels. When I first saw the patient there was no hemorrhage, and the irritability of the patient did not justify disturbing her. At the second visit she was dying and beyond help.

Dr. Morgan: I know that suppuration of the parotid gland is rare. The pain in this case disappeared when the swelling of the parotid gland subsided. I do not think that the child had a post pharyngeal abscess.

Dr. M. F. Porter: I have seen a hemorrhage occur from the internal carotid artery, then stop, then occur again, and it was necessary to ligate the artery.

Regular program: "Submucous Resection of the Nasal Septum," by Dr. A. E. Bulson, Jr.

Deviations of the nasal septum produce obstructed breathing and reflex disturbances which manifest themselves in asthma, irritative cough, middle ear inflammations, headaches, eye troubles, etc. The deviations are various, some mild and some severe, and while a slight deviation may not need correction, those that interfere with respiration or cause irritation from pressure, should be corrected. The submucous resection is now the operation of choice, and is worthy of more extended use. The essayist described his method of operating, which consisted in opening the mucous membrane on the right side in each case, whether the deviation is on that side or not, and after separating the mucous membrane and perichondrium, the cartilage and deviating bone are removed with cutting forceps. He advised leaving a bridge of columnar cartilage in front and not removing any cartilage or bone above three-eighths of an inch from the roof of the nose. He performs the operation under cocaine anesthesia with the patient in the sitting posture, and uses loose gauze and cotton dressings for twelve hours only. Said he had had excellent results in a large number of cases, but, like most operators, had had a few perforations and a few cases of sepsis in his earlier experience in the operation.

DISCUSSION

Dr. Wheelock: I do not believe that all, or even a fair portion of deflections of the nasal septum are due to injury, most are congenital. When the operation in indicated, and it is indicated in obstruction, ocular reflexes, etc., it should be done. I have seen it do good in many cases of this type. As to the preparation of the patient, I use argyrol (50 per cent.), paint over the mucous membrane. I give also 1/100 hyoscin and ⅛ grain of morphin hypodermically. I use a 4 per cent. solution of cocain packed into the nasal chamber. I have never had a toxic effect of the drug.

Dr. Glock: The reason that the submucous operation was devised was because the operation for crushing and straightening the cartilage was, in a large proportion of cases, a failure. I have always used the method of dipping a cotton applicator into adrenalin solution, then into the pure cocain crystals and allowing it to take up all the crystals it will, then rubbing it across the mucous membrane. I have had a great deal of difficulty in so placing the stitches and closing the perforation of the mucous membrane. There is seldom, if ever, any cartilage regeneration after the removal of the cartilage. There is a deposit of fibrous tissue.

Dr. Morgan: It seems to me that the application of sterile vaselin would retard the union in these cases.

Dr. Bruggemann: I would like to ask how much anesthesia of the deeper structure takes place by smearing cocain over the mucous membrane. I have seen many resections of the septum made and I did not think that the anesthesia of the deeper tissues was good. I should think that blocking off the nerve supply and blood supply would give better anesthesia and aid in this operation. I could never understand why it was necessary to cut out every little portion of bone after the obstruction to breathing is removed.

Dr. A. E. Bulson: I have seen a number of reflex conditions of the eyes clear up after operations upon the septum. When I use sufficient cocain *solution* to produce anesthesia I find I get some systemic disturbance. I have never had this effect if I use the pure crystals. I find also that cocain has less systemic effect when used after a full meal. Some operators have used an injection of cocain under the mucous membrane, but it has proven of little advantage. The application of pure cocain crystals and adrenalin solution sufficiently blocks the blood and nerve supply to prevent systemic absorption. I have been able to find the record of but one fatal case of meningitis following this operation.

No business. Adjourned.

Meeting of April 27, 1915

Society met in regular session in the assembly room of the court house with nineteen members present. Meeting called to order by President Rhamy. Minutes of preceding meeting read and approved as read.

No clinical cases.

Regular program: "Episiotomy a Perineal Safety Measure," Dr. C. J. Rothchild.

DISCUSSION

Dr. B. Van Sweringen: I have employed the episiotomy incision a number of times and have never had occasion to regret it. A clean incision heals much better than a ragged tear.

Dr. Morgan: I do not favor this incision. I employed it only once and I did not get a good result. One argument against it is that it does not gain much in popularity. It is not a new method.

Dr. Duemling: As to the direction of the episiotomy incision, it should not be made in the axis of the vagina, but in the axis of the body of the patient. The levator ani muscle is the most important structure involved. We should strive to save the lower portion of the muscle, not the upper part. A badly distended muscle is not as easy to repair for the surgeon afterward as a torn muscle is. I should think that when you cannot get through with the Walcher position that the episiotomy incision is a good surgical measure.

Dr. McOscar: This operation can be done with safety and leave a good perineum. A tear is dependent on an unrelaxed condition of the muscle. One thing proved conclusively of the tissues along the birth canal is that they will relax sufficiently to allow the passage of a normal child, but if you are compelled to deliver rapidly where there is insufficient time for this relaxation, episiotomy is a good procedure.

Dr. Rothchild: The incision should be made after the levator ani has been pushed back. I believe that the results are best when great care is exercised in suturing the wound. The suture should not be placed transversely and the vaginal mucosa should not be penetrated by the suture.

The application of Dr. Mendenhall acted on favorably by the board of censors was presented. Motion carried that the secretary cast the unanimous ballot of this society for Dr. Mendenhall for membership. Ballot so cast.

Communication requesting the appointment of a committee of three in addition to the president and secretary of the County Medical Society to be appointed to act as the representatives in this county of the National Red Cross Association. Motion carried that this society comply with this demand. The president than appointed Drs. B. Van Sweringen, E. E. Morgan and M. F. Porter as the Red Cross committee.

Adjourned. G. Van Sweringen, Secretary.

DELAWARE COUNTY

The regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building, Friday evening, June 4, and was called to order at 8:15 by Past President U. G. Poland, M.D.

Dr. George R. Green spoke on "Fractures Involving the Joints," saying: The question of the proper method of treating these fractures has never been settled and is not likely to be soon, as so many things must be considered in each individual case to modify the treatment. It probably will remain one of the big problems of surgery. Fixation with retention apparatus, suture with silver wire, bone plates and later metal plates have had their advocates and have been used with results both good and bad. Nature is an energetic bone carpenter, and with a little assistance on the part of the surgeon or patient, will perform remarkable repairs; but in extreme cases of doubtful issue, where contusions, blood clots or deformities difficult or impossible to correctly adjust present, the joint should be opened, the fragments approximated and steel plates attached with short screws.

Open treatment of fractures has lost much of its opposition, since it has been clearly proved that many of the bad results of the earlier days was due to lack of antiseptic and even aseptic precautions. Opening of a joint should be undertaken only under the most rigid asepsis. In my opinion, the technic of strict asepsis is more difficult than the mechanics of the treatment. Correct apposition of fragments is an important essential, for if the operator accomplishes this no callus is required. If the edges are not apposed Nature throws out a bridge of callus, and large provisional callus is never completely absorbed. How long shall we leave a fractured joint in its original splint? If the thermometer indicates that all is well, I believe six weeks should elapse before dressing is removed; then after a few passive movements it should be reapplied and left one week longer. Patient should be instructed to be very careful about beginning use of injured member.

In the discussion Drs. Trent, Jackson, Kemper, Wadsworth and Mix each cited cases demonstrating the practicability of certain methods of treatment. Dr. Mix does not favor long immobilization, believing that prolonged fixation results in stiff joints.

Adjourned. H. D. Fair, Sec.

LAKE COUNTY

The Lake County Medical and Dental societies met in joint session at the Gary Commercial Club, Wednesday, June 9, at 7 p. m.

There were present thirty-three physicians and fourteen dentists, Dr. J. W. Iddings presiding.

The meeting was addressed by Drs. Wilbur E. Post and Arthur D. Black of Chicago, discussing "Local Focal Infections." After a general discussion by those present, the meeting adjourned and the members repaired to the dining room, where a buffet luncheon was served.

It was unanimously decided to make the joint meeting of the two societies an annual event.

E. M. Shanklin, Sec.

MONTGOMERY COUNTY

Montgomery County Medical Society met in regular session on June 16, which will be the last meeting until September 21, when Dr. S. L. Ensminger will read the paper on "Injuries of the Radiocarpal Joint."

Thirty-five doctors were present at the June meeting. After regular business session they adjourned to the banquet hall and partook of a bounteous supper. Dr. T. L. Cooksey, secretary, presided as toastmaster, and speeches were made by Harry Fine, attorney-at-law, president of the hospital board of Culver Union Hospital, on "Our Hospital"; Rev. Moss of the Christian Church, who spoke on "Christianity and Medical Progress," and Dr. A. W. Brayton of Indianapolis.

The Ninth District Medical Society will meet at Crawfordsville, the "Athens of Indiana," next June, and the local society is already planning for its entertainment.

Crawfordsville observed clean-up day recently, under proclamation of the city mayor, and they are giving a challenge for any outsider to come there and find a dirty street or alley.

Our county society is planning on some great meetings the coming year.

Adjourned. Thomas L. Cooksey, Sec.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Cephaeline.—An alkaloid obtained from ipecac. It is relatively more emetic and less nauseant than ipecac and causes more renal irritation and less cardiac depression. It may be used as an emetic and expectorant. It is insoluble in water, but forms water soluble salts.

Syrup Cephaeline, Lilly.—A non-proprietary preparation containing cephaeline hydrochloride, equivalent to 2/5 grain cephaeline per fluidounce. Eli Lilly & Co., Indianapolis, Ind. (*Jour. A. M. A.*, June 19, 1915, p. 2067).

Ouabain Ampules, H. W. & Co.—Each ampule contains 0.5 mg. crystallized ouabain. Hynson, Westcott & Co., Baltimore, Md. (*Jour. A. M. A.*, June 19, 1915, p. 2067).

PROPAGANDA FOR REFORM

Tanlac.—Tanlac (The Cooper Medicine Co., Dayton, O.) is a "tonic and system purifier" and is exploited to the public by means of extravagant and absurd claims. From an examination made in the A. M. A. Chemical Laboratory it appears that Tanlac is essentially a vinous extract which contains 15.7 per cent. absolute alcohol by volume, a bitter drug (such as gentian), an emodin-bearing drug (such as buckthorn, rhubarb or cascara), a berberine-bearing drug devoid of hydrastine (such as berberis aquifolium), glycyrrhizic acid (from licorice), and is flavored with wild cherry and to which has been added a relatively large proportion of glycerin. The "Tanlac Laxative Tablets" which accompany Tanlac contained phenolphthalein (*Jour. A. M. A.*, June 5, 1915, p. 1930).

E-Lep-Tine.—E-Lep-Tine is an "epilepsy cure." According to the Indiana State Board of Health, it contained sodium and potassium bromides 16 per cent. alcohol and ammonium valerate (*Jour. A. M. A.*, June 12, 1915, p. 2006).

Herbetta Curine.—A package of Herbetta Curine contained three envelopes, labeled 1, 2 and 3, respectively, and in addition a number of red tablets. The A. M. A. Chemical Laboratory found that No. 1 consisted of tablets which contained soluble iron phosphate; No. 2, of tablets which contained some "bitter tonic," and No. 3, of tablets responding to tests for aloes or aloin. The red tablets were composed essentially of strontium and potassium bromide (*Jour. A. M. A.*, June 12, 1915, p. 2006).

Lepso.—The A. M. A. Chemical Laboratory found this to contain bromides, equivalent to 51 grains potassium bromide per dose of one-half ounce (*Jour. A. M. A.*, June 12, 1915, p. 2006).

Iodex.—Iodex (Menley & James, Ltd., New York), is said to contain 5 per cent. of iodin; the advertising suggests that the effects of free iodin are to be obtained from the preparation, which yet is said not to stain the skin. It is also claimed that thirty minutes after inunction, iodin can be found in the urine. The chemists of the A. M. A. Chemical Laboratory on examination found that Iodex contained only about half the claimed amount of iodin, that the iodin did not behave as free iodin and that after inunction of Iodex, iodin could not be found in the urine. Because of these findings and because of the unwarranted therapeutic claims made for the preparation the Council on Pharmacy and Chemistry held Iodex ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, June 19, 1915, p. 2085).

Venodine.—Venodine (The Intravenous Products Co., Denver) was stated to be "an Intravenous Iodine Compound" put up in ampules, each of which contains "28 grains of Sodium Iodide, ⅛ grain each of Beechwood Creosote and Guaiacol in a suitable vehicle, and excipients to enhance its compatibility with the circulating blood." The "Therapeutic Indications" were said to include "infectious diseases, such as syphilis, tuberculosis, bronchitis, bacteraemias associated with chronic and acute nephritis (Bright's disease), and other infections." The Council on Pharmacy and Chemistry found Venodine ineligible for New and Nonofficial Remedies because it was exploited under unwarranted and grossly exaggerated therapeutic claims; because neither the name nor the advertising matter indicated that it was a preparation of the well-known sodium iodide; and because the combination of two such similar substances as creosote and guaiacol is unscientific, adding mystery to the preparation without increasing its efficiency (*Jour. A. M. A.*, June 26, 1915, p. 2155).

Calcreose.—Calcreose (Maltbie Chemical Co., Newark, N. J.) contains in loose combination approximately equal weights of creosote and lime. The advertising claims having been revised, the Council on Pharmacy and Chemistry postponed definite action pending submission of proof (1) that the large doses of Calcreose recommended furnish large amounts of

creosote to the blood and (2) that patients taking these large doses do not suffer from digestive disturbances, loss of nutrition, albumin in the urine or phenol urine as claimed. At the same time it was emphasized that this action did not indicate a belief on the part of the Council that enormous doses of creosote are necessary or beneficial in tuberculosis. So far, the Maltbie Chemical Co. has not submitted the required evidence. As the Council's postponement of a report has been made to appear as a quasi-approval, the Council voted to announce that Calcreose had been refused recognition because the therapeutic claims were exaggerated and unwarranted by the evidence (*Jour. A. M. A.*, June 26, 1915, p. 2155).

Intravenous Radium Solution.—Standard Radium Solution for Intravenous Use (Radium Chemical Co., Pittsburgh) is sold in ampules, each containing radium bromide equivalent to 0.05 mg. radium element and 0.0002 gm. or less of barium bromid dissolved in 2 c.c. of sterile normal salt solution. While the Council on Pharmacy and Chemistry confirmed the claimed composition of this solution so far as concerns the radium content, if refused recognition to the preparation because there is no clear evidence that intravenous injection has any advantage over the other methods of administering radium. The Council holds that on the basis of our present knowledge radium should be used intravenously only by those in a position to study its effects carefully and in an institution equipped with the necessary facilities for such study (*Jour. A. M. A.*, June 26, 1915, p. 2156).

Rheumalgine.—Rheumalgine (Eli Lilly & Co., Indianapolis) is put up both in tablet form and as a liquid. Each tablet, or teaspoonful of the liquid, is said to contain "Strontium salicylate from Natural Oil 5 gr., Hexamethylenamin 2 gr., Colchicine 1/200 gr." The Council on Pharmacy and Chemistry found Rheumalgine in conflict with its rules in that unwarranted therapeutic claims were made; because the combination is conducive to uncritical prescribing and because the name, being non-descriptive of its composition encourages thoughtless use (*Jour. A. M. A.*, June 26, 1915, p. 2156).

Typhoid Vaccine.—Extensive clinical trial indicates that typhoid vaccine may influence the course of the disease favorably. The results indicate that, if used with discretion, typhoid vaccines do no harm (*Jour. A. M. A.*, June 26, 1915, p. 2139).

BOOK REVIEWS

Progressive Medicine—Vol. XVII, No. 1, March, 1915. Edited by Hobart Amory Hare, M.D., and published by Lea and Febiger, Philadelphia.

In the discussion on the surgery of the head and neck by Frazier, the chapters dealing with the cerebrospinal fluid and the hypophysis stand out as the best brief reviews of those subjects available at the present time.

In view of the increasing interest in the general subject of cancer, and cancer of the breast in particular, one is disappointed at finding such a very brief reference to the subject of cancer of the breast.

Ruhräh's discussion of the infectious diseases, including acute rheumatism, croupous pneumonia and influenza, is admirable. It is a real treat to read such an exhaustive and well-written review.

The chapter on diseases of children is splendid. The discussion on diseases of the heart in children, acidosis in infancy and recurrent sibilant bronchitis is unusually good.

In the review of rhinology and laryngology the discussion on the treatment of hay fever by the injection of pollen toxin or vaccine will be of considerable value to all those having a practical interest in that subject.

The Cancer Problem. By William Seaman Bainbridge, A. M., Sc.D., M.D., Professor of Surgery, New York Polyclinic Medical School and Hospital; Surgeon and Secretary of Committee of Scientific Research, New York Skin and Cancer Hospital; Consulting Surgeon, Manhattan State Hospital, Ward's Island; Honorary President, First International Congress for the Study of Tumors and Cancers, Heidelberg, 1906; etc. Cloth bound, 534 pages, fully illustrated, $4.00 net. The MacMillan Company, New York.

This is a very interesting and timely volume, which gives a clear, concise, comprehensive, and available résumé of the world's work with reference to cancer, its history, distribution, etiology, diagnosis, possibility of prevention, and treatment. As stated by the author, there is need for such a book of ready reference, and it should be in the hands of the general practitioner, the specialist, the intelligent layman, and the lecturer on health matters.

It would be difficult to single out any part of the book that is better than any other, as the entire work is an undertaking that does credit to the author. The section devoted to the diagnosis and possible errors in diagnosis is especially interesting; as also are the sections on surgical and nonsurgical treatment. The latter alone are worth the price of the book because of their comprehensiveness, including as they do all the known dependable knowledge covering the subject of treatment, whether surgical or non-surgical. The section devoted to the investigation of cancer "cures" points to the errors of pinning faith to means and measures that are advocated by those who have neither the knowledge nor the skill to interpret conditions, and the author very wisely discusses the subject, "What Constitutes a Fair Test," for it is generally conceded that sporadic or isolated instances of cure of any disease by a given means do not necessarily serve to indicate the successful application of the method to the general run of cases. The discussion of the subject, "Irremovable Cancer," and remarks concerning institutions for the cure of cancer patients are appropriate.

The book concludes with a chapter concerning the campaign of education and the best means of conducting the same.

The book is particularly valuable just at the present time when there is so much agitation concerning the cancer question.

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ORIGINAL ARTICLES

THE TREATMENT OF INCIPIENT CATARACT WITH SUBCONJUNCTIVAL INJECTIONS OF CYANID OF MERCURY *

A. B. KNAPP, M.D.
VINCENNES, IND.

My excuse for bringing up this subject at this time is the fact that we have heretofore had to tell these unfortunates there was nothing to do but wait until their cataracts matured so that we might operate on them. This is always a very severe sentence to pass, especially when both eyes are affected alike. In this treatment we do not expect to have a perfect remedy, but one in which we hope to benefit some of our cases and to stay the progress of the opacity. Our short experience with this treatment shows us that we must take the cases before the opacity is well advanced.

In 1911 I received a reprint of an article published by Colonel Smith of India, relating his experience with subconjunctival injections of cyanid of mercury in the treatment of lens opacity. The paper referred to has been misplaced and I did not take the trouble to look up the original, hence I cannot quote him in detail. All of the cases treated and reported by Smith were those with only slight opacity. When we are importuned by those whose usefulness and happiness is threatened by blindness, we usually are willing to try anything that holds out a ray of hope, and this is why I used the treatment in the following cases. It is noteworthy that in one case the eye was myopic after the treatment, when the indications are that it had never been so. This patient had three or four pairs of glasses which she wore prior to the beginning of cataract and from these I judge when I say that she was not near-sighted previously. In another case the near-sightedness was increased by the treatment. In all of my cases I gave a hypodermic of morphin one-half hour before giving the injection. After anesthetizing the conjunctiva I grasp it with a fixation forceps and plunge the needle deeply into the orbit midway between the external and superior recti muscles. The pain is considerable, but usually subsides in two or three hours. The chemosis is intense and even the eyelids and the face sometimes puff up until it is absolutely impossible to open the lids wide enough to see the eyeball. This swelling subsides in the course of a few days without harm to any of the tissues. The strength of solution used is 1 to 4,000, and twenty minims is the dose usually used.

In the first few cases treated I was afraid to use the full dose and probably failed to get results because of not having used a large enough dose. It is easy to make the mistake of giving this treatment when the opacity is well advanced, in which case we fail to get results. Darier long ago used both cyanid and bichlorid of mercury subconjunctivally for other diseases of the eyeball, and Jones of Cumberland, Md., read a paper at the Atlantic City session of the A. M. A. in 1912, advocating the use of this solution for sympathetic inflammation, choroiditis, interstitial keratitis, keratitis with uveitis, retrobulbar neuritis, iritis, etc., but for the cure of lens opacity I have never seen it referred to in literature other than that mentioned above.

I did not have the courage to use the dose advised by Colonel Smith in my first cases, which may in a measure account for indifferent results.

* Read before the Indiana State Medical Association, Lafayette, Sept. 24, 1914.

Case 1.—Mrs. J., age 78, was seen first July 17, 1911, for disturbance of vision of six months' duration. Lens opacity was diagnosed; dionin was prescribed; injection advised. At this time she could still see to read and sew, vision being equal in both eyes. Jan. 1, 1913, I saw her again, at which time she could not see to read large print and in strange places she had to be led. On this date I gave her an injection of 5 minims of cyanid of mercury 1 to 4,000, right eye. There was only slight reaction from this. On Feb. 7, 1913, I gave a second injection of 10 minims in the same eye. Feb. 24, 1913, I saw her again and thought some improvement could be noted. At this time dionin was prescribed for constant use in both eyes. When seen in June of this year there was no change in the condition of the right eye, while the left was slowly failing.

Case 2.—Mrs. B., age 68, was seen first March 18, 1913. Lens opacity in both eyes. Right eye vision equal to 15/200 and could not read ordinary print, neither could vision be improved. Dionin was prescribed and injection advised. April 27, 1913, 8 minims of cyanid solution were injected into the right eye. July 15, 1913, a second injection of 15 minims was made in the same eye. Two months later she had vision 20/50 with — 2.00 diopter sphere, and could read ordinary print with + 3.00 sphere. A letter dated Aug. 29, 1914, says, "My eye is stronger than when I saw you last September. I can see well at a distance and can read and sew as well as I ever could when I use my glasses. I can even read large print without glasses."

Case 3.—Mr. B., age 68, was seen March 18, 1913, with opacity well advanced in both eyes. Vision equal to 5/200 in each eye. Gave subconjunctival injection of 10 minims in the left eye. There was no improvement in the condition of this eye when I last saw him. Vision had not failed in the eye treated, while the fellow-eye was almost totally blind.

Case 4.—Mrs. W., age 62, was seen first June 10, 1913. She could see only daylight with the right eye. The left eye began to fail about the first of this year, but she can still see to read large print. Vision equal to 20/100, improved to 20/60 with + 2.00 cylinder, axis 90. Gave injection of 15 minims with slight improvement in vision. When seen in July of this year, or twelve months later, opacity had not increased and vision was the same as described above.

Case 5.—Mr. L., age 67, was seen first July 12, 1913. Vision right eye 15/200, improved with — 3.00 to 20/40. Left eye 7/200, improved to 20/100 with same correction. Aug. 6, 1913, gave 20 minims of cyanid of mercury solution subconjunctivally in the right eye. When seen June 20, 1914, had vision 20/30, with — 4.00 in right eye, and light perception in left. Other cases treated have been too recent to report results.

In conclusion I wish only to say that in no case has opacity advanced in the eyes treated, while in the fellow-eye vision has failed in all cases that were not already blind. In one case the eye seemed to become myopic as the result of treatment, while in another case the myopia was increased.

Since writing this paper, I saw in the *Ophthalmic Record,* September number, that Colonel Smith gave a talk on this subject before the Oxford meeting of the International Ophthalmological Congress last July. He evidently has not changed his mind as to the efficacy of the remedy.

DISCUSSION

Dr. Albert E. Bulson, Jr., Fort Wayne: I have used subconjunctival injections of mercury for a long time, but I have never used them in incipient cataract and I do not think I ever shall. I think the essayist is to be commended for having had the courage to try such a heroic treatment in this class of cases. We must remember that Colonel Smith has been using his treatment in a far different class of cases from those which we see in this country. Those people in India, with their stoic dispositions, their ability to stand pain, their early development of cataract at the time when their physical condition is much better than in advanced age, are very different from the cases we have to deal with here, and all these things must be taken into consideration when we estimate the value of the treatment. If any of you have used the subconjunctival injections of cyanid of mercury, you know what a painful procedure it is for the patient. I discussed the paper read at Atlantic City to which Dr. Knapp referred and well remember the discussion by other members of the section on ophthalmology. It was the general consensus of opinion that the subconjunctival injection of cyanid of mercury is a most heroic treatment, and one which should be reserved for the infected cases. Cataract is not an infective condition. It is a disturbance of the nutrition of the lens. I would fear to use the treatment on patients whose physical condition at 60 or 70 is not of the best. There are very few who are advocating this particular form of treatment. There are those, however, who have advocated the subconjunctival injections of dionin, which, to my notion, from a physiologic point of view, is much more applicable in the treatment of these cases than is the injection of mercury. I have used dionin with a fair degree of success and you will notice that the essayist in practically

all of his cases is using dionin also, not subconjunctivally, perhaps, but locally, and we know that dionin has a favorable effect on the nutrition of the lens through lymphagogue action.

I think the author of the paper should be commended for having tried the treatment and for the report of these cases. He apparently has been very successful, and he is in good company when he follows in the line of work that has been introduced by Colonel Smith of India; but here, again, I want to call attention to the difference in the class of patients that Colonel Smith has to deal with in India and those we have to deal with in America.

Dr. George F. Spohn, Elkhart: I would like to have the essayist explain how long this pain persists. My use of mercury has not been in this line, but then my experience has been that this pain did not persist after giving a hypodermic of 1/150 grain of atropin and 1/4 grain of morphin, or hyoscin combined with the morphin. Usually when the effect of the morphin had subsided the effect of the mercury had also subsided. Of course, I mean with the application of cocain to the eye also. And so I would like to have the essayist tell us his experience as to how long the pain of the mercury persists.

Dr. G. E. Cullipher, New Maysville: I have seen a number of these injections given by Dr. Wagner, in the clinic at Dr. Fisher's school in Chicago—not, however, for the purpose of treating cataract, but for other purposes.

So far as the pain is concerned, it lasts for different lengths of time in different patients, and they seem oftentimes to stand it better after one or two injections. Do you find, Dr. Knapp, after the second or third injection, that the pain does not last so long?

Dr. Knapp: I could not see any difference in the degree or length of time of the pain.

Dr. Cullipher: Some of the patients complained for an hour and some for the greater part of the night.

Dr. Knapp (closing the discussion): In reply to Dr. Spohn's question and also the last speaker, as to the length of time of the pain, my experience with all of the patients has been that the pain resulting from the injections subsided with the effects of the morphin. In other words, the morphin produced sleep for an hour or two and when the patient awakened he or she complained very little or not at all from pain in the eyes.

The reaction in some cases is much greater than in others. The reaction in the class of cases referred to by Dr. Bulson would be infinitely greater than in the cases referred to in my paper, for the reason that in any of the infectious cases you already have inflammation. In the class of cases reported you would not have inflammation. That makes a vast difference, because I have used the injections in infected cases and from experience know the difference in the reaction is very great. The pain in the eyes already inflamed when the treatment is used is very much greater and of longer duration than in the class of cases in which I use it and to which my paper referred.

The treatment is entirely new, as I said, and will bear watching and further investigation, but what I have learned from the few cases that I have treated leads me to say that it should be tried, and that I am willing to try it in any case that comes to me needing it. There is no age limit to its use. I would not fear to use it in any case in which I felt safe in giving a hypodermic of morphin of one-quarter grain.

THE INDICATIONS FOR CESAREAN SECTION *

Wm. F. Howat, M.D.
HAMMOND, IND.

Samuel Taylor Coleridge[1] said: "I think there are only two things wanting to justify a surgeon in performing the cesarean operation: first, that he should possess infallible knowledge of his art, and secondly, that he should be infallibly certain that he is infallible."

This dictum represents fairly well the opinion of the laity at that time, and is not a wholly inaccurate presentation of the opinions held by the majority of the medical profession of the day. With the rise and development of the modern era of surgery — the era of antisepsis and asepsis — the cesarean operation must be considered from a different point of view. The conditions surrounding the employment of this obstetrical procedure have been radically changed, and the indications for its use have been widely extended.

Each and every obstetrical procedure adopted in pathological parturition must find its justification in its capability to preserve the life of the mother, the life of the child, or the life of both, and this in a way that, with the minimum of hazard, shall secure the maximum of health, comfort and future usefulness of those immediately concerned.

Before setting forth my opinions as to the indications for cesarean section, I shall, simply for its historical interest, briefly relate the history of the operation, and enumerate the indica-

* Read before the Indiana State Medical Association, Lafayette, Sept. 24, 1914.

1. Coleridge, S. T.: Table Talk.

tions for its employment, as stated by authorities, both ancient and modern.

The antiquity of the operation is much in dispute. The Greek and Roman medical writers make no mention of it, and yet, we are told, the Roman law of Numa Pompilius, 715 B. C., made its performance compulsory in case of the death of a pregnant woman. It is plainly evident that this post-mortem operation was not a humanitarian procedure undertaken in behalf of the welfare of the mother, but was "a public measure" adopted for the possible benefit of the state. Pliny the historian, who should be crowned as purveyor-in-chief of the fabulous, is responsible for the erroneous belief that Julius Caesar was thus delivered.

Whether or not the Talmud makes reference to the operation has been much discussed, and the matter has long since become one of interpretation of terms. To anyone familiar with the ease with which certain minds can read desired meanings into words and phrases it will be apparent that a decision, authoritative and binding on all, is yet a long way off. De Lee,[2] however, is authority for the statement that the ancient Jews applied the name "Jotze Dofan" to the children delivered by way of the mother's flank.

It would be indeed strange if the universal-minded Shakespeare had failed to refer in some dramatic way to this procedure. Consequently no surprise may be excited when we hear MacDuff exclaim to the superstitious MacBeth:

> "Despair thy charm;
> And let the angel whom thou still hast served
> Tell thee, MacDuff was from his mother's womb
> Untimely ripp'd."[3]

There is no doubt that the post-mortem operation was performed by the ancients, and there is a strong probability that living woman were occasionally delivered by this method long prior to the date of the cases recorded in present-day text-books as being the earliest authentic examples of the procedure.

Guy de Chauliac is probably the first medical writer to make mention of the operation. In his Chirurgia, published in 1363, he refers to the operation and advises its performance in cases of sudden death of the mother at or near term. About 1500 Nufer, a Swiss swinegelder, is said to have performed cesarean section on his wife after the midwives in attendance on her had pronounced her delivery by the natural passage impossible. The operation was successful and she is reported to have had subsequent natural deliveries. In 1581 Rousset, physician to the Duke of Savoy, published a treatise on cesarean section in which he reported ten successful cases. One patient had been operated on successfully six times. In her seventh pregnancy the surgeon who had attended her on the previous occasions was absent, and as no one would operate on her she died undelivered. Mauriceau, writing in the next century, discredited these reports and denied Rousset's truthfulness.

Almost a century (in 1610 to be exact) after Martin Luther had focussed the attention of continental Europe on the Saxon town of Wittenberg, Trautmann performed in that place the first well-authenticated cesarean section. The patient lived almost a month and then died very suddenly. From this time on the references to the operation become more numerous. Sonne, a physician of Bruges, is said to have delivered his wife seven times by cesarean section, and Rudbecke, professor of physic at Upsala, Sweden—a predecessor of the famous Linnaeus — is reported to have delivered his wife by this method, saving both mother and child.

Felkin[4] is authority for the statement that the natives of Uganda, Africa, have been performing this operation for a long time. He witnessed its performance by a native, and from the description of the crude but efficient technic employed it is evident that centuries must have elapsed ere the present stage of development had been reached. In 1769 a negro slave in Kingston, Jamaica, successfully performed cesarean section on herself. In 1822 a 14-year-old quadroon successfully delivered herself of twins by this method. As recently as 1879 an Austrian woman, after being in hard labor for three days, seized a razor and performed section upon herself. A neighbor sewed up her wound and she recovered. Harris[5] has remarked, with reason, that if the ignorant and excited of modern times have done these things it is not unreasonable to suppose that in ancient times the same thing may have happened.

I have been much interested in noting the indications for the operation as given in the literature that has been within my reach. We have already noted that Roman law, Guy de Chauliac and others gave the death of the mother as the sole indication for its perform-

2. DeLee, J. B.: Principles and Practice of Obstetrics, 1913.
3. Shakespeare, Wm.: Macbeth, Act 5, Scene 8.
4. Felkin, R. W.: Edinburgh Med. Jour., April, 1884.
5. Harris, R. P.: The Caesarean Section and Its Substitutes, Ashhurst's International Encyclopedia, 1886.

ance. Rousset evidently favored a wider and more frequent employment of the operation, and Bauhin in 1661 took a similar position, Paré, Guillemean (1635), Mauriceau (1672), Dionis (1719) and Ould (1742), however, held to the older view, and considered the operation justifiable only as a post-mortem procedure. In 1746 La Motte took a forward step when he wrote "the os sacrum, ischium and pubis, being from their first confirmation so close to one another, that the surgeon can hardly introduce a few fingers between them, it being consequently impossible for the child to come through, is the only case where this operation is to be put in practice." Five years later Burton argued for a wider employment of the operation, and in the same year the judicious Smellie[6] summed up the situation in a concise way, and his opinion is probably that of a large percentage of practicing physicians to-day. He said: "When a woman cannot be delivered by any of the methods hitherto prescribed and recommended in laborious and preternatural labors, on account of the narrowness or distortion of the pelvis, into which it is sometimes impossible to introduce the hand; or from large excrescences or glandular swellings, that fill up the vagina and cannot be removed; or from large cicatrices in that part and at the os uteri, which cannot be separated; in such emergencies, if the woman is strong and of a good habit of body, the cesarean operation is certainly advisable, and ought to be performed; because the mother and child have no other chance to be saved, and it is better to have recourse to an operation which has sometimes succeeded, than leave them both to inevitable death."

Churchill[7] calls cesarean section the last resort of midwifery, and says that the proposal to use it as an ordinary substitute for craniotomy is simply absurd. He gives the following as indications for its employment: When the anteroposterior diameter of the upper outlet, or the transverse diameter of the lower, is not fully 2½ inches. In these cases it is either impossible to extract a mutilated fetus, or if possible, it is with so much force as to cause the death of the mother. In these cases cesarean section is necessary whether the child is alive or dead. It may also be necessary in women who have borne children naturally and in whom mollities ossium has developed. When morbid growths, periosteal or otherwise occlude the birth canal. When rupture of the uterus occurs and delivery is imperative but impossible by the natural passages. When the mother dies suddenly, in order to save the child. In cases of extra-uterine pregnancy where the continued presence of the fetus in the abdomen threatens the mother's life. He also quotes other authorities as recommending it in extensive wounds of the uterus near the end of pregnancy, and also in occlusion of the vagina, scirrhus of the uterus and allied conditions.

S. D. Gross[8] gives three indications, namely: deformed pelvis, rupture of the uterus and sudden death of the mother.

Ramsbotham[9] gives sudden death of the mother, and extreme disproportion between the pelvis and fetus as the indications. Agnew[10] mentions deformed pelves as in rickets and malacosteon, and large tumors or exostoses of the pelvic bones as the indications. Ashhurst[11] gives extreme deformity of the pelvis, and the hope of saving the child in cases in which the mother dies suddenly. R. P. Harris[5] enumerates rachitic deformity of the pelvis, pelvic collapse from malacosteon, kyphoscoliosis, dwarfing of the pelvis, fibroid tumors blocking the pelvis, exostoses from the ischium or sacrum, epithelioma of the cervix, obliteration of the os uteri, cancer of the vagina, atresia of the vagina, and impaction of the fetus in a transverse position (generally with an arm protruding); and Lusk[12] gives the following conditions as warranting the operation: extreme degrees of pelvic contraction; solid tumors encroaching upon the pelvic space; advanced carcinomatous degeneration of the cervix; when the mother is moribund and the child alive, and rapid delivery by the natural passages impossible; and when the child cannot be delivered alive in any other manner and the mother requests that the operation be performed.

Parvin[13] says that obstruction of the birth canal either by uterine tumors, tumors of adjacent organs, tumors of the pelvis, conditions of the cervix or vagina causing marked contraction, or by pelvic contraction, that precludes the delivery of even a mutilated fetus, constitutes an absolute indication for cesarean section. "The relative indication is given by those pelves so constructed that a living child cannot be de-

6. Smellie: Midwifery, vol. 1, p. 239, 6th. Ed.
7. Churchill: Theory and Practice of Midwifery, 4th Ed., 1860, D. F. Combie, Editor.

8. Gross, S. D.: System of Surgery, 3d Ed., vol. 2, 1864.
9. Ramsbotham: Principles and Practice of Obstetric Medicine and Surgery, Amer. Ed., 1865, Keating, Editor.
10. Agnew, D. Hayes: Principles and Practice of Surgery, 1881, Vol. 2.
11. Ashhurst, Jno., Jr.: Principles and Practice of Surgery, 5th Ed., 1889.
12. Lusk, W. T.: Science and Art of Midwifery, 3d Ed., 1890.
13. Parvin, Theophilus: Science and Art of Obstetrics, 3d Ed., 1895.

livered at term, or by the induction of premature labor, or if the pregnancy has advanced beyond the time for the safe induction of labor."

J. C. Cameron[14] states that the indications are absolute when it is impossible to deliver the fetus, either living or dead, or mutilated, through the natural passage, on account of extreme pelvic contraction from arrested development, rickets or osteomalacia; or on account of the passages being blocked by tumors of the pelvis, uterus or soft parts. When there exists a degree of pelvic contraction or obstruction less than is requisite to constitute an absolute indication, but yet sufficient to make the safe delivery of a living and viable child by the natural passages doubtful, the indication is relative.

Hirst[15] gives as absolute indications, extreme pelvic contraction (6.5 cm. conjugate measurement in flat pelves); high grade kyphosis; osteomalacia; spondylolisthesis; Naegele's pelvis; foreign growths, cicatricial contraction of the vagina, carcinoma of the cervix or of the rectum causing pelvic obstruction. When there is a choice between the cesarean and other modes of delivery, as craniotomy or symphyseotomy, the indication is relative.

Williams[16] considers the indication absolute when the true conjugate measures 7 cm. or less. When the true conjugate is 8.5 cm. for flat pelves and 9 cm. for justominor pelves, the indication is relative. Since in some of these cases spontaneous delivery will take place he advises that labor should be allowed to proceed to the second stage for one hour. If at that time the head has not engaged, cesarean section should be performed if the woman be in good condition, uninfected, the child alive and conditions favorable. He holds that version and high forceps should disappear in the management of such cases.

Webster[17] gives as an absolute condition all cases in which the fetus, living or otherwise, cannot be delivered by the natural passages. The relative indications arise when a choice is to be made between cesarean section and symphysiotomy, embryotomy or induction of premature labor. He holds that cesarean section is as safe for the mother as embryotomy, and saves the child in most cases. Premature labor, while safe for the mother, is usually fatal to the child. As further indications he enumerates contraction of the bony pelvis to such an extent as to render forceps delivery impossible; great diminution of the parturient canal by tumors of the bones or soft parts, or by cicatrization of the vagina; marked displacement of the cervix following vaginal or ventrofixation; eclampsia when the pelvis is contracted, or when the mother dies, the fetus being alive in utero; accidental hemorrhage (rarely); some cases of placenta praevia, and rarely in cases of monstrosity. Unless there is an absolute indication present he holds that the operation is contraindicated when labor has been long in progress and repeated attempts at delivery have been made, and when the mother is exhausted or infected.

De Lee[18] says that narrowing of the birth canal (whether from contracted pelvis, a true conjugate of 6 or 6½ cm., exostoses, tumors, stenosis of cervix and vagina, or neoplasms of the uterus or adnexa) which precludes the possibility of delivering a child even when reduced in size by mutilation, constitutes an absolute indication when labor is on. The relative indication exists whenever in the judgment of the accoucheur delivery by the abdominal route offers better chances for mother and child than delivery from below. This broadens the field for cesarean section greatly, but it makes the responsibility of the attendant correspondingly greater. Among the conditions which may render the operation warrantable he enumerates contracted pelvis, when the mother is in good condition, uninfected, not exhausted, and the child in good condition; placenta praevia at or near term, the child alive, the placenta central and the mother in good condition; eclampsia at or near term with a tightly closed os; abruptio placentae when the birth canal is unprepared; stenosis of cervix; scars in cervix or vagina when complicated by other abnormalities, as contracted pelvis, pelvic abscess, placenta praevia, etc.; vaginofixation of uterus; healed vesico-ureterovaginal fistula; mammoth child with or without contracted pelvis; ovarian cysts or fibroids (infected or otherwise), and habitual death of the fetus in labor.

E. P. Davis[19] gives as conditions justifying the operation, disproportion between the mother and child, physiologic incompetence for labor, and occasionally central placenta praevia, eclampsia and threatened occlusion of the cord. He holds that the operation must be a primary one, and emphatically states that frequent attempts at delivery, frequent vaginal examinations, efforts to dilate the cervix, septic condi-

14. Cameron, J. C.: American Text-Book of Obstetrics, 1896.
15. Hirst, B. C.: Text-Book of Obstetrics, 1st Ed., 1898.
16. Williams, J. W.: Quoted by Webster.
17. Webster, J. C.: Text-Book of Obstetrics, 1903.
18. DeLee, J. B.: Principles and Practice of Obstetrics, 1913.
19. Davis, E. P.: Operative Obstetrics, 1912.

tions in the birth canal and exhaustion of the fetus constitute contra-indications for celio-hysterotomy. In a later article,[20] however, he takes a broader view and adds threatened uterine rupture and labor complicated by pelvic tumor as indications.

J. N. Bell[21] does not restrict the operation within such narrow limits, since he has performed it in cases of moderately contracted pelvis even after repeated attempts at forceps delivery, in cases of fibroid tumor even if the child be dead, in central placenta praevia, and in justominor pelves in which labor was delayed beyond term, and in one case of a like nature with prolapsed cord.

A. B. Davis,[22] in citing a large series of cases, enumerates as indications for the operation the following conditions: contracted or otherwise deformed pelvis; eclampsia; placenta praevia; accidental hemorrhage; prolapse of the cord with a living child and rigid undilated cervix; tonic uterine contraction; ventral suspension or fixation of the uterus; new growths obstructing or preventing dilatation of the birth canal; face impacted with chin posterior; rupture of the uterus with living child; large child with marked disproportion between it and the capacity of the mother's pelvis; mothers about to die with living fetus; cases in which repeated obstetric operations per vaginam have failed to secure a living child.

T. F. Greene[23] says that cesarean section is generally indicated when the child can be born only after instrumental or other delivery that may cripple it for life, if not cause its death, or when delivery subjects the mother to the possibility of extensive laceration, with shock and probable impairment of her future health. While formerly the so-called absolute indication was the only indication, he thinks that at present all indications are absolute. The points to be considered in any case are the size and shape of the pelvis, the relative size of the child, its position, and the extent of ossification of the head, and the ability of the mother to force the child through the birth canal in a reasonable period of time.

In pre-antiseptic days there was good reason to hold vesarean section as an operation of last resort. It is unfortunate that, with modern improved technic, the same attitude toward this procedure is maintained by many of the profession. The more nearly we come to making it an operation of election and not of compulsion, the better will be our results, as regards both mother and child. Of course, the personal equation will always be an important factor in the question, and the operation will continue as a method of last resort in many cases. To reduce these cases to the smallest possible number should be one aim for the present, and with this in mind we may all venture to add our opinions and experiences to the mass already recorded.

The conditions which render cesarean section either imperative or justifiable are:

1. Disproportion between the child and birth canal, whether from contraction or deformity of the pelvis, from undue size of the child, or from premature ossification of the cranial bones preventing molding of the head during labor.

In cases of extreme contraction or deformity of the bony pelvis, in which even a mutilated child could not be delivered by the natural passages, all are agreed that cesarean section must be performed. The same hold good for those cases in which pathological conditions of the cervix or vagina render the passage of the child impossible. In cases of moderate pelvic contraction or deformity in which a mutilated child could be delivered, the cesarean operation should be performed if the mother be in good condition and the child alive. If the child be dead, the mode of delivery — embryotomy or section — which offers the least risk to the mother should be adopted. Even if the labor has been prolonged, even if frequent vaginal examinations have been made, even if delivery by forceps has been attempted, even if there be some probability of maternal infection, I still think cesarean section offers as good chances to the mother, and certainly better to the child, than does embryotomy. Embryotomy is by no means devoid of danger to the mother, especially when performed by one not an expert in obstetric procedures of this sort. A mother exposed, from frequent and careless examinations and manipulations, to the dangers of infection, is not exempted from those dangers by embryotomy.. On the other hand, she is not exposed to those dangers to a greater extent by the carefully performed cesarean section. The likelihood of shock or exhaustion is, I think, less in cesarean section than in embryotomy, since the former can usually be more quickly performed, and, in my experience, with less danger of opening new avenues for the spread of infected material already in the birth canal.

20. Davis, E. P.: The Present Status of Caesarean Section, Am. Jour. Obst., July, 1913.
21. Bell, J. N.: Am. Jour. Obst., December, 1912.
22. Davis, A. B.: Am. Jour. Obst., December, 1912.
23. Greene, T. F.: Caesarean Section, Boston Med. & Surg. Jour., July 30, 1914.

When the child is of great size, even in the normal pelvis, or when the head is firm and incapable of molding, the cesarean section should be the operation of election.

2. Pelvic and abdominal tumors, either uterine or extra-uterine, such as uterine fibroids, dermoid cysts, ovarian cysts, infected or uninfected. These usually obstruct the passage of the child or materially interfere with uterine contractions. In one of my cases an intramural uterine fibroid in a multipara prevented normal uterine contractions. In most cases the offending tumor may be removed at the time of section. At any rate, when one or more of these conditions are present cesarean section should be performed. The same holds true for pelvic abscess.

3. Physiologic incompetence for labor, though rare, may be a positive indication for cesarean section. This may be a consequence of various constitutional diseases running a more or less chronic course, of cardiac disease where lack of compensation precludes the possibility of enduring labor, or it may be due to a true inability for labor per se.

4. Habitual death of the child in labor is a positive indication for cesarean section. The history of repeated stillborn children delivered at term — the children having died during the process of parturition — when the mother is healthy (and by this I mean when syphilis can be positively excluded as a cause) warrants the cutting operation.

5. Stenosis of the cervix (either from disease or former operative procedure), vaginal atresia, or cervical or vaginal carcinoma call for cesarean section as a conservative procedure for both mother and child.

6. Fixation of the uterus — vagino fixation and sometimes ventro suspension — has been given as an indication for the operation, since the fixation, if it has been successful, interferes with, or prevents, uterine contractions. This is also true of old, dense pelvic adhesions in which the uterus is bound in a site unfavorable for labor.

7. Eclampsia. Competent authorities have waged a battle royal of wits over the question of eclampsia and cesarean section. Peterson[24] in a recent article gives a lucid exposition of a very exhaustive study of the subject. Eclampsia occurring in a woman with a contracted pelvis constitutes a positive indication. Eclampsia occurring at or near term in a primipara with an undilated or rigid os is also a positive indication, either by the vaginal or abdominal method. When eclampsia occurs in a multipara in whom the os is rigid or undilatable the same holds true. When the os is dilated or dilatable, and the pelvis and child of normal proportions, conditions are entirely changed and the cesarean operation will very rarely have to be even considered.

8. Abnormal presentations of the child often call for cesarean section. Impacted breech presentations, transverse position of the child when the membranes are ruptured, shoulder and arm presentations (with or without prolapse of the cord) that cannot be replaced, not infrequently demand section.

9. A double uterus, when pregnancy has occurred in one portion, and the non-pregnant uterus interferes with delivery, constitutes one of the rare indications.

10. In placenta praevia cesarean section should be the operation of choice if the bleeding be profuse and at or near term, the placenta central, the os but slightly dilated, the mother a primipara, and the pelvis contracted or obstructed by pathologic conditions. If the mother be a multipara and the os undilated, or but slightly dilated, even though the pelvis be normal, I am convinced that cesarean section offers the best chances for mother and child, provided the surroundings are suitable for the operation. In cases of partial placenta praevia with a well-dilated or dilatable cervix and roomy pelvis, occurring before term it is good practice to pass around the placenta, grasp a foot and deliver either by the Braxton-Hicks method or by rapid delivery. In the centrally located placenta praevia if the mother be in extreme peril as a result of the hemorrhage, the child alive and not out of proportion to the birth canal, and the os dilated or dilatable, that method of delivery should be employed which offers the greatest advantage to the child. In these cases either cesarean section or perforation of the placenta and version are almost invariably fatal to the mother. The condition of the os (as to its state of dilatation or dilatability) thus constitutes an important item in the management of the case.

11. Uterine inertia has been given as an indication for cesarean section. In cases of profound inertia—those cases that, in fact, come under the head of physiologic incompetence for labor, and that resist all methods of overcoming the inertia—the operation is indicated. In the milder cases, where the inertia may be overcome by other measures, the operation is only

24. Peterson, Reuben: Am. Jour. Obst., June, 1914.

called for when other indications for its performance exist, such as tumors, contracted pelvis, etc.

12. Tetanic contraction of the uterus may call for the operation as a means of saving the life of the child.

13. Threatened uterine rupture, if the mother be in fair shape and the child alive is an indication. When there is present a high contraction ring, a thinned out lower uterine segment and a living child, irrespective of the position of the child, the operation is indicated. Particularly is this the case when there is moderate pelvic contraction, and even when the labor has been long and tedious, and the mother endangered by damaging manipulations. Here the interest of the living child becomes the question of first importance.

14. When a woman has had, for any reason, a previous cesarean section and pregnancy subsequently occurs, an indication for the operation is present. Even if birth be possible by the natural passages, the danger of uterine rupture in the old scar is ever-present and ever-threatening. It is true, natural deliveries have taken place after section had been performed, but the cautious obstetrician should hesitate before subjecting the woman to the hazard of uterine rupture, especially when it is possible to select one's time and create one's surroundings for the care of these cases.

EXTRA-UTERINE PREGNANCY *

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The purpose of this paper is to deal with the early phases of extra-uterine pregnancy. I do not lay claim to any new symptoms or modes of arriving at a diagnosis. If I succeed in impressing on the minds of my hearers the importance of the early recognition of extra-uterine pregnancy and thereby save many lives that might be otherwise lost, I will feel amply repaid for the time you have given me.

This accident to pregnancy has been known almost as long as there has been any real knowledge of obstetrics. In the eleventh century, extra-uterine pregnancy was discussed in the writings of Albucasis, and in the sixteenth century Cordaens speaks of a fetus that was converted into a lithopedion and carried in the abdomen twenty-eight years.

When the fertilized ovum is arrested at any point outside of the uterus and there undergoes development, such condition is designated as extra-uterine or ectopic pregnancy. Extra-uterine pregnancy is primarily almost always located in the tube, but may become tubo-ovarian, intraligamentous or abdominal. Ovarian pregnancy is a rarity.

The time of retention of an extra-uterine pregnancy is sometimes remarkable. There are cases recorded where the fetus remained in the abdomen forty-six years and fifty years, respectively.

There are all sorts of cases reported where the bones of the fetus ulcerated through the bladder, rectum, vagina and even the anterior abdominal wall.

Among the many causes assigned for the accident of extra-uterine pregnancy may be mentioned torsion of the tube, catarrhal and purulent salpingitis, peritoneal adhesions and bands compressing the tube, diverticula from the lumen of the tube and the various inflammatory conditions of the tubes.

The earlier writers on this subject were greatly hampered in studying the causation of extra-uterine pregnancy by the erroneous views of the place of meeting of the ovum and the spermatozoa. Formerly it was supposed that fertilization occurred in the upper portion of the uterus. Recent observations by Hofmeier have, however, shown that fertilization may take place in the tube or abdominal cavity and that the current produced by the uterine cilia in women is in the same direction as the tubal current which is downward. It is thought that extra-uterine pregnancy is simply due to some interference with the normal downward passage of the fertilized ovum through the tube.

A great many writers believe that the inflammatory affections of the tube play a most important part in the causation of extra-uterine pregnancy. Diverticula of the lumen of the tube is also a fruitful cause. It is here that the ovum either perishes or goes on in development. Cases are reported where tubal pregnancy occurred in the tubes in which no lesions whatever could be discovered by the most careful examination. Tubal pregnancy may occur in any portion of the tube, hence the variety of terms used in expressing the same. Dr. Huffman advances the theory that special tissue may become misplaced during the development of the tubes and uterus from the millerian ducts. He also feels that the mutual relationship of imbedding area and fecundated ovum has been

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overlooked by most investigators in searching for the causes of extra-uterine pregnancy. It is not impossible that there may be other causes of which we know nothing at the present time.

The symptoms of extra-uterine pregnancy are in some cases similar to normal uterine pregnancy. In rare cases the woman has reached full term in ignorance of any unusual condition. In a large percentage of cases the woman does not know of her condition until she is warned by the pain and discomfort in the lower abdomen that there is something seriously wrong. She may have passed over one, two or three periods before this warning is given her. The changes in menstruation vary a great deal. Menstruation usually ceases when tubal pregnancy begins, though not with the same regularity as in normal pregnancy. Sometimes menstruation continues for a few months and then ceases. In other cases, menstruation is arrested for the first few months, then returns with more or less regularity during the latter months of pregnancy. There may be an irregular discharge of blood throughout the whole course of pregnancy. You may often find shreds of decidual tissue of various sizes coming from the uterus at different times during pregnancy. If the physician is consulted early he may be able to discover the tumefaction of the tube. With the nausea, irregular and scanty flow, distress in lower abdomen he would suspicion an ectopic. The mass might contain pus. I believe a great many of these cases are never diagnosed until rupture takes place.

It is much easier to make a diagnosis after rupture. The classical train of symptoms of a ruptured tube are where a woman has missed one or more periods, is suddenly seized with agonizing pain, faintness, coldness of the extremities, face blanched and bathed in cold perspiration, rapid and feeble heart action, nausea, retching and complaining of great fatigue. To such a train of symptoms, a diagnosis would not be difficult to make. We do not always find all cases presenting such a clear picture of extra-uterine pregnancy.

Because there are usually no symptoms to direct the patient's attention to an abnormal condition, the diagnosis of extra-uterine pregnancy is not often made until after the rupture of the tube. Frequently she thinks she is normally pregnant.

Unfortunately, the physician seldoms sees these cases until rupture has occurred, and in some cases long after the rupture has taken place. When there has been considerable escape of blood into the peritoneal cavity so as to cause bulging in the culdesac, one can use an aspirating needle to ascertain the nature of the contents of the mass.

Dr. J. B. Murphy made a correct diagnosis before rupture of a case last year by means of the Abderhalden test, which was proved correct on the operating table. This test is not very old and it remains to be seen in what percentage of cases a positive reaction does occur. The test is so delicate and difficult that it would not be of much service to the country practitioner in remote districts.

Many cases of ectopic pregnancy are discovered in the dead room which were not recognized during life. Ectopic pregnancy has many times been found while operating for other lesions.

Dr. Kelly of Baltimore relates a case in which there was a cessation of menstruation and an irregular return with sudden severe pain in the right side, followed by similar attacks; the patient was compelled to go to bed, and showed a decided pallor. There was a slight elevation of temperature. The examination revealed an irregular mass to the right of the uterus, free from the density usually found in pelvic abscess. A diagnosis of extra-uterine pregnancy was made, but the operation proved the case to be one of simple pelvic abscess.

We must not forget that a good percentage of cases of ruptured extra-uterine pregnancy sooner or later become infected and form a pelvic abscess, in which case both conditions exist simultaneously. The presence of the old blood clots evacuated with the pus will at once suggest the nature of the original affection and the microscopical examination of the villi will set the diagnosis at rest.

Surgery, in my opinion, is the only rational treatment. It is true that sometimes the rupture may occur into the ligament and the hematocele may be small enough to be entirely absorbed in the course of time. Yet at that the patient is taking great risks. The patient should be operated as soon as a diagnosis is made, unless there is profound shock. In these extreme cases open the abdomen, stop the hemorrhage and close the wound as quickly as possible, otherwise you will sacrifice the patient. Free drainage for a day or two in these severe cases is usually all that is required. If I find pus I usually mop out the cavity with ether.

In the last five years I have operated nine cases of extra-uterine pregnancy in and around Kokomo. Six of these cases occurred southwest of Kokomo, about ten miles, and all six were within a radius of four or five miles of

each other. The reason of this I am unable to explain. One of these nine cases died eleven hours after operation. The other eight are all enjoying good health. None of these have since become pregnant.

I wish to report the last two cases operated.

Case 1.—On March 30, I was called in consultation with two other physicians to see Mrs. S., age 29. She had always had reasonable good health, had a severe case of smallpox eight years ago. Has one child ten years old, no miscarriages. Menstruated regularly. She menstruated last of February. About the first of March, she felt nauseated on arising, and this continued for nearly two weeks. For the first three weeks of March she would menstruate one day of each week. Begun to have distress in lower abdomen about one week after she felt her nausea. On March 23, she had a severe pain in right side, became dizzy and nauseated. Following this attack, the distress in lower abdomen became more pronounced and she began to run a temperature. On March 30, when I saw her, temperature was 102, pulse 126. Had her sent to hospital and operated immediately. The abdomen was filled with clotted blood up to the umbilicus. The blood clots were firmly adherent to omentum, bowels and walls of the abdomen. The damaged tube was removed and as much of the blood clots as I could safely remove from the bowels without injury to them. Several times I thought I had the placenta, but examination revealed organized clots. After cleaning the abdominal cavity of as much of the blood I thought was safe, the abdomen was closed, using a large rubber drainage tube and gauze. This drainage tube was removed in three days. The temperature went to normal within twenty-four hours and remained so for three weeks. The opening left by the drainage tube did not entirely heal. At the end of three weeks, she began to run a temperature of 99 to 100. Another week was spent in gaining her consent to reopen the wound. I enlarged the sinus and could feel the placenta at the bottom of the wound. This was removed together with a fetus two inches long. Filled the hole with ether, mopped out gently and closed. In another week the wound was entirely healed. The patient states that she feels better and stronger than she ever did before her illness.

Case 2.—Mrs. G., age 36, a strong robust woman who often went into the fields and helped her husband to do the farm work was taken suddenly sick with severe pain in her left side. She had menstruated regularly since her last child was born six years ago. Her last menstruation was four days early. Three or four days after she began to flow, she was seized with the pain in her left side. This was on Friday night. These pains were intermittent until Sunday, when they became so severe that she called her physician. On Monday afternoon, I was called in the case and diagnosed ruptured tubal pregnancy and advised immediate operation. A few hours later she decided to be operated. Early Tuesday morning I opened the abdomen and found clotted blood in the peritoneal cavity. The left tube was about the size of my two thumbs and 4 inches in length and filled with a solid blood clot. The tube was removed. The right ovary had some small cysts and one blood clot. These I removed, leaving about three-fourths of the ovary. The appendix was also removed on account of an endo-appendicitis with numerous adhesions. A large drainage tube was placed in the left culdesac for thirty-six hours. In two weeks, the wound was entirely healed and the patient sitting up.

In the other seven cases the rupture had taken place some time before they came to me. In some of these, the blood clots almost filled the abdominal cavity. They were treated in the same way as the last case reported.

DISCUSSION OF SYMPOSIUM (PAPERS BY DRS. HOWAT AND COX)

Dr. J. B. Berteling, South Bend: If we had listened to no other paper at this meeting than the paper which has just been read by Dr. Howat, the time and the expense of coming to the meeting would have been worth while. It is one of the burning questions of the day, this matter of cesarean section versus embryotomy. I say that because I remember distinctly thirty years ago when Dr. Harris of Philadelphia, the great statistician, reviewed and gathered all the statistics relative to this question of cesarean section it was then possible to obtain, finally reported on the matter, he stated that out of eighty cases of cesarean section, thirty-nine cases had been successful as far as the mother was concerned and that forty-one had died, and that was the record the world over. It makes one who lived at that time and now hears this paper, realize the change in surgery, when you think that at that time thirty-nine mothers were reported saved and forty-one died, and here you now have records of forty cases. Prince, of Birmingham, Ala., told me recently that in the last ten years he had done forty cases of cesarean section and had lost one mother and two babies, and these were sections for every imaginable reason: for eclampsia, for contracted pelvis, tumors and what not. I have just learned that a surgeon in a city of Indiana has operated on thirty cases. I hope that he is here. I do not know his success as to the mortality of the mother. However, it is remarkable how successful these cases have become.

There is one thing, however, that we should be very careful in regard to, not to go to extremes as we did many years ago in removing every case of ovarian degeneration. Every suspected ovary had to come out, until half the women were spayed. Now, the cesarean section is so comparatively easy for a surgeon that knows surgical technic and knows how to carry it out, that it is far easier to do than a complicated case of appendicitis. From a commercial point of view there is also the danger to be avoided, and which may have to be considered, that when cesarean section becomes so much easier than a forceps delivery, that, as it costs so much more, it may become pabulum for the fee-splitter.

This paper really ought to have been read not before the Surgical Section, because, while it is truly a talk on surgical matters, it should really have been read in the General Session, where the obstetricians and general practitioners are present. At the present time, in the General Section, or in the Medical Section, there is a paper being read which is entitled "Better Obstetrics." This paper that we have listened to just now is a plea—not only a plea, but it demonstrates that we are doing better obstetrics to-day than we have done in the past—and a plea for even better obstetrics in the future. Now, when it comes to cesarean section, while it should be done probably by a man who has the surgical instinct, yet it is a subject of the greatest interest to the general practitioner, because obstetrics is, after all, the royal road to the confidence of the family and every doctor that starts out wants to have as much obstetrical practice as he can. For that reason, he should be the best possible obstetrician, not as he has been in the past, but he should take all the measurements and make all the examinations necessary prior to the final delivery of the woman to determine whether a possible cesarean section is in sight, and then find, if he cannot do it himself, the man to do it, and he should advise the patient what she may expect and make such preparations as are necessary that she may be within reach or at no great distance from a good, first-class hospital, or have the necessary first-class surgeon come to the house, which could be done if the proper preparations were made.

This paper in the section across the hall also may cause us to see the whole subject from a different angle, namely, that while the general practitioner is interested in obstetrics because the birth of the child is a physiological act and can be taken care of in a very great many cases without any instrumentation whatever and in the great majority with the assistance only of a midwife, that, therefore, because of the fact that these cases are so physiological in a great number of them it does not require any particular skill. I want to make a plea right here. I believe that every obstetrical case, after it has ceased to be a physiological case, or, in other words, when delivery does not take place with the normal processes, that it becomes a surgical procedure and that, therefore, every obstetrician, every general practitioner who practices obstetrics occasionally or as a side-issue, should have a surgical instinct, know how to do surgery if necessary; and if he cannot do it himself, know the indications when cesarean section should be performed.

Twenty-five or thirty years ago, again, if you will permit me, the question was paramount as to whether the mother should be considered first or the child. Then, the child's safety was not considered at all; the mother's only was considered; and although they had succeeded by bringing out embryotomy in reducing the mortality of the mother down to 7 per cent., or even lower than that, the children all died. Cesarean section was at that time such an impossible operation, an operation of last resort, and, of course, we know why now, simply because it was in the days unantiseptic surgery, when to open an abdomen was fraught with much danger.

Dr. William H. Williams, Lebanon: Relative to the paper that was read, I am sure that we all agree with the manner of presentation of this particular kind of case; also I think we agree that probably both of these papers should be read by the majority, if not by all general practitioners, because success in dealing with any one of these conditions largely depends on an early diagnosis. In ectopic pregnancy, if an early diagnosis has been made it is not so difficult to give the case the proper treatment. This has been impressed so firmly on my mind by some cases I have seen that I certainly will never forget it. One case, in particular, was brought to me for operation about two weeks after the rupture of the tube had taken place, the woman's abdomen full of blood, and the patient severely jaundiced, running a temperature of 103, and the case had been diagnosed as a case of appendicitis. So it seems to me that with cases in that condition presenting themselves to us, it is very necessary that a diagnosis should be made as early as possible.

In the second paper, the enumeration of the indications for this operation would be merely a repetition of words, because they have been set forth in that paper very beautifully. The essayist has given all the indications that are to be considered to bring about and call for a cesarean section in order for us to arrive at a plain common-sense conclusion when we have these various conditions before us, to arrive at a definite conclusion then as to what shall be

done, and I am sure that in the indications set forth we will find a most excellent and safe guide.

I consider that cesarean section is absolutely safer at any time, that is, when we have these indications before us, as has been stated, than any of the mutilating operations that are sometimes resorted to. I am sure that cesarean section is far better even in many cases where forceps delivery is done, especially those that partake of the character of a tug-of-war battle, possibly, as we sometimes have seen. I have, I feel now that I have, been guilty of using forceps in some cases where I should not have done so. I succeeded in delivering the patient; but I consider that it was much to the detriment of the child and of the mother. Then, too, in these extreme cases you may be able to deliver a living child; the mother will probably be coming to your office or some other office for treatment for years to come. You do damage the pelvis many times so that it seems almost impossible to repair, and so, in these conditions, I say, we would be justified by far in doing cesarean section in preference to other methods of delivery. It is true that we must not forget that environment has much to do with the cure of these cases. The general practitioner many times does not see the case until he is called to care for the woman after labor has come on. He has not had an opportunity to study the patient, and he is somewhat unprepared, but even at that stage if he will be careful in his examination, careful in his consideration of the indications that lead up to an operative procedure of this sort, ordinarily he will arrive at the proper conclusion at a time when his patient can be given the best of care. The number of hospitals in this day and the accessibility, by means of transportation, largely rule out the excuses for not giving the woman the advantage of an operation of this sort because she does not have the proper surroundings or cannot be given the proper surroundings; because I believe that it is not going to hurt these patients to transport them from their homes, ordinarily, to some place where they can be taken care of as much so, at least, as to subject them to the procedures that might be necessary in the home in order to deliver them by some of the forcible means that are at times employed.

Dr. G. B. Jackson, Indianapolis: There is just one point in this paper that I wanted to speak of briefly, and that is in regard to the serum diagnosis referred to. Dr. Peterson, I believe, has made the diagnosis of pregnancy in ectopic gestation, or Dr. Murphy has made the diagnosis, on a positive Abderhalden test. Dr. Ketcham is just this morning reading a paper across the hall on this test, in which paper she acknowledges that the stage of digestion in the normal individual, constipation, or bacteriemia, or toxemia, will give a positive Abderhalden test; so that I should think that as a means of differential diagnosis in these abdominal crisis cases, it would be worthless in establishing a diagnosis of ectopic. The test as a negative indication is valuable, for if you receive a negative test you know there is no pregnancy, but as a positive test it is of little value unless those other matters may be excluded.

The paper on cesarean section I would like to speak on briefly without rehashing any of the general details or going over the list of indications, which are constantly being broadened. I want to make a plea, particularly, for the primipara. It is surprising how much of the literature you may peruse without seeing the least mention of the difference in indications for this operation in primipara and multipara. I believe there are many cases where that difference alone should determine us in deciding on the cesarean section. At any rate, most of my experience in my sections have been in primipara. It makes a great difference whether the woman is a primipara or not. They have all mentioned the laceration of the cervix. To my mind, that is the sole difference between the primiparous and the multiparous woman. I have considerable regard for the dependent floor of the abdomen. I believe that tears and ruptures—hernias, if you please—of the dependent floor of the abdomen are more important than injuries to the anterior abdominal wall, and I believe that most of the operations that have a place as a matter of consideration as opposed to the cesarean section are mutilating operations, in the perineum, of the primipara. Not so much because of the cervix, although that offers great difficulty, but because of the undilated pelvic floor or abdominal floor, if you please.

Take the matter of eclampsia. Eclampsia in a primipara at or near term is to my mind an absolute indication for cesarean section, just as absolute as the mechanical impossibility of delivery. We know that by the cesarean in these cases we save most of the babies, we know that we give the mother a better chance than by any other means of delivery. The same thing is true of central placenta praevia in a primipara. If the woman is multiparous in either of these cases, we can conceive of some other means of delivery, but I do not believe any of us can conceive of any other means of successful delivery in the primiparous woman, at any rate, if we consider the question that was spoken of, of the future health and happiness, and subsequent happiness of the individual, and, after all, that is the thing we are working for.

Now, the matter of relative disproportion does not always depend on the maternal parts

and there again, really, whether the woman is a primipara or not has some value, although not marked; for instance, you have a case of long labor. I recall one case where the woman had been in labor a considerable length of time; finally dilatation of the cervix was complete; a primipara, head not engaged, never had been settled, and palpatory examination revealing what we knew to be a large baby—by the way, this baby had providentially attempted to fix itself in the most favorable attitude for delivery, having been a breech case up to ten days before and having turned over in the night, and wakened the mother in so doing; they called me up and told me about it and I did not believe it and went out and examined and found it had turned over and presented the head—a big baby, dilatation complete, normal pelvis, membranes having ruptured and the woman dry for an hour and still no engagement in spite of good pain. Then an attempt was made under anesthesia to do a version of that head, with no success. I believe that was a marked indication for cesarean section, which was done.

Dr. John A. Pfaff, Indianapolis: I will not keep you more than a few minutes. These excellent papers, I believe, as Dr. Berteling said, should have been read in the General Section, because amongst the surgeons there is not very much of an argument any more as to what should be done. The argument often occurs as to a diagnosis, and that is the great thing. In ectopic gestation, for instance, the diagnosis is one of those things which are thrust on the family doctor, very frequently in the middle of the night, unheralded by any premonitory evidence as far as he is considered. So it has to be a condition that is diagnosed by the family doctor in many cases. Unfortunately, too, the diagnosis of ectopic gestation is very seldom made at the time when we have every chance for the best results. It is a comparatively easy matter to diagnose ectopic gestation; there is no doubt about that at all, because it is in all the books.

I believe the one great lesson which this subject may teach us is the importance of recognizing the surgical character of almost any persistent abdominal pain. There are very few cases of persistent abdominal pain as a salient feature that are not derived from some local condition which demands sooner or later, and usually the sooner the better, some form of surgery. That was brought to my mind by a case that I have just operated on, not a case of ectopic pregnancy, however. A man in Indianapolis, a delegate to one of the conventions held there this week, was stopping at one of the hotels and was taken suddenly with a very severe abdominal pain. He had some difficulty in getting the hotel office and was all that night without attention. The next day, he had this same persistent pain and developed nausea, the pain, however, not being on the side to suggest appendicitis to any extent. He was treated for twenty-four hours in the usual way, the pain being relieved by hypodermics and the case was being studied to arrive at the diagnosis. At the end of the twenty-four hours, a diagnosis was ushered in by the occurrence of pronounced fecal vomiting, and when I saw him the diagnosis was very easy. We took him to a hospital and operated on him for an absolute obstruction of the bowels from adhesions, etc. He died from the absorption of toxins. The operation was a very easy one and quickly done—simply cutting bands—but he died in the operating room.

So, I think that in ectopic gestation we have usually a pain that has not been accounted for. Usually, the woman has not noticed any cessation of the menstruation, but she has been having some pain, has noticed a peculiar pain and has spoken of it to her husband very likely; that pain has been there, it comes in paroxysms but does not remain absent any great length of time; however, perhaps, no great attention has been paid to it, until the doctor has been called and has studied the case.

Even the Abderhalden test will not be conclusive proof, but I heard of a case recently where a positive reaction was obtained. While it is a great help, it is not unfailing. So in these cases an early suspicion should be aroused and our diagnosis should be made on several signs, and must be, especially the woman's persistent pain; and then is the time when help should be called. The surgeon is sometimes called on to make the diagnosis.

I am sorry that I shall not have the time to discuss the other paper.

Dr. Leonard F. Schmauss, Alexandria: These were both very excellent papers. In the main, the indications were excellent, but some of the positive indications which were given in regard to the cesarean section, I think should be modified and given as relative indications. Nor, for instance, eclampsia: There may be cases where it is a relative indication and other cases where it is absolute. I do not think that every case of eclampsia should be subjected to cesarean section. The ordinary measures should be employed promptly and energetically, and if no results are obtained the patient should be subjected to cesarean section. The same thing applies to persistent death of the fetus. There may be good reason why the other fetuses have died, and in that case we should try to avoid those causes, and perhaps we may obtain a living child. But it may become a positive indication for cesarean section. Now, in regard to placenta praevia, I cannot understand why in regard to this condition all the indications should have been to do the delivery

by the cesarean section. Perhaps, in the majority of cases the condition can be quite easily controlled by packing with iodoform gauze; but you cannot do it by packing with iodoform gauze if you have not the proper instruments, good light, etc., for if the packing is not done properly it is no good. However, I have had several cases where this procedure stopped the bleeding and the case would take a normal course. So in that condition packing should be done, and if it does not control the bleeding, it becomes a positive indication for cesarean section. The same obtains in regard to uterine inertia. Of course, you would not use cesarean section unless you had tried everything you could. It may be overcome by giving strychnin, but I would not attempt this by giving $\frac{1}{60}$ grain. I would give $\frac{1}{30}$ or $\frac{1}{20}$ grain and repeat every half hour until $\frac{1}{4}$ or $\frac{1}{5}$ grain had been given. I have done that repeatedly without any toxic symptom in an individual. I never had a case, never saw a case in which a toxic symptom existed. There are many measures by which inertia may be converted into active labor.

In regard to ectopic pregnancy, I should say that every case of ectopic pregnancy should be operated on as soon as the diagnosis is made, and I would go a step further and say that every case should be operated on even on suspicion provided the case warrants operative interference. We all feel that in making a diagnosis, a great deal of harm is done in this condition as in other conditions, such as peritonitis and appendicitis, if one waits for an absolute diagnosis to be made. If there is a diagnosis of a surgical condition made, the case should be subjected to operation.

Dr. James A. Work, Elkhart: In a case which I was asked to operate on recently, only yesterday morning in fact, a case of deformed pelvis in a young woman who had suffered from infantile paralysis at the age of 3 years and who has walked with a crutch ever since, there are two features presented by the case which are noteworthy. The first feature was the cooperation which I obtained, which was gladly given me by the family physician, who has known the young woman all her life and who resides in Lansing, Mich., I never having seen him. When the case first came to me, I told her that it would probably result in cesarean section and the mother, who lived in Lansing, reported this to her family physician. He heartily concurred in the statement I had made. The second feature was a legal consideration. While the patient was on the operating table, the young woman's mother asked me if I would not sterilize her so that she would not become pregnant again. I had not obtained the girl's consent to sterilizing her, and I like to have some authority from the patient in any operation. I would like to have some authority cited by the essayist as to whether the patient's consent would be necessary.

Dr. B. Van Sweringen, Fort Wayne: There are one or two points on which I would like to say something. The first, I think, is in regard to technic of operation for a ruptured ectopic. Dr. Cox in his paper spoke of the fact that in two of the cases he had employed drainage. It seems to me from the experience that I have had in these cases that drainage is not usually necessary unless there be some free infection present. I do not think that as a rule more than the removal of all of the blood within the abdomen is necessary. I have operated perhaps twenty of these cases and in no case have I drained at all, and further than that, most of the cases were closed without the removal of all of the clots.

In regard to the other paper, there is just one further indication that has occurred to me for the cesarean section. It is in the case of old primiparas with a breech presentation and undilated cervix. In this class of cases, of course, the operation becomes the conservative method of delivering, in regard to the child. That is to say, it is a child's operation, and I think the child deserves as much consideration under these circumstances as does the mother. Further than that, the trauma is no greater in a section than it is by delivery of the child through the natural passages when it is evident that they must be greatly damaged.

Dr. Charles C. Terry, South Bend: I just want to say a word in regard to some things which have been mentioned in the papers that are under consideration and which are not often enough taken into account in my opinion. That is the myocardial changes that take place in some cases in the mother. I do not think that we take into consideration as we should the matter of blood pressures. They should be taken and used as a matter of comparison and may mean much to the mother.

As to the mention in the paper of eclampsia in regard to cesarean section, one case that I saw was done for eclampsia and a dead fetus found. That was two years ago, and this spring she was delivered again. That is an important thing to decide, what to do in the second pregnancy, when cesarean section has been done for eclampsia; when to interfere; when to use forceps; and the management of the case and the choice of procedure in cases of pregnancy is quite as important as it is in all surgical conditions of the abdomen.

It was stated here that the early diagnosis is an important thing, which it is, of course. It is in any surgical condition, but it is not as important as an early operation. The mortality that we get in cesarean section is not due to the fact that it is a difficult operation which

requires great skill to perform; it is due to delay, practically all the mortality to the mother and the child is due to delay. I have only had four cases with mortality. All the mothers lived. These cases were due to delay. I think it is an important thing, and it must be a matter of education as regards the laity and the general practitioner so that early operations may be undertaken, as, indeed, in all other surgical conditions of the abdomen. It does not require as much skill as many other abdominal operations do.

These two points that I have mentioned, or, at least, the one thing in regard to the myocardial changes which may be a complication, I think of great importance and too often neglected.

Dr. Edgar Cox, Kokomo (closing): Just one word, and that is in regard to the removal of the clots of blood in the abdomen in ectopic pregnancy. It has been my custom to remove that which was smooth and I could easily scoop out, the removal of which required only a few minutes. The rest I leave, and close quickly.

Dr. F. W. Howat, Hammond (closing): I have very little to say in answer to Dr. Work's question. I must plead ignorance as to the legal phase of this question of sterilization. There is, however, another phase to that; there is the moral phase. It seems to me that the individual primarily considered is the mother, and unless it is at her request I do not believe that sterilization is justifiable. You do not know but that that child which you may deliver by a successful cesarean section to-day may live for three or four months and then die. If a sterilization has been done on that woman, that family is barred from the possibility in the future of progeny. While, to-day, the rest of the family may be willing to have that woman sterilized, yet four months from now, when that baby has passed to the Great Beyond, that woman and that family may not be so anxious for sterilization.

WHY SURGERY IN INTESTINAL STASIS?

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It may seem out of place to bring this paper to you so soon after the symposium presented at the last meeting of the A. M. A. by so many able men. My excuse, or my apology, is, that exhaustive as this symposium was it still left untouched many of the practical questions of the theme.

I wish it understood at the beginning that the term—Intestinal Stasis—in the caption, is used because it is most widely understood as covering collectively a physical condition and a number of symptoms of physical retrogression, or retardation, too numerous and far reaching to be described in this paper and not susceptible of a single descriptive term, due to a failure of the intestinal tract to eliminate its absorbable poisons manufactured or isolated in the course of digestion and assimilation. I shall make no attempt at the bacteriology or the chemistry of these poisons.

I also wish to recognize the fact that constipation is a relative term, usually considered with twenty-four hours as the unit of time and one or two bowel movements as the corresponding normal, whereas, the question should not be how many times a day or week the bowels move, but how often and how thorough must be the evacuation to be consistent with the health of the individual patient: so, in the use of the word constipation I mean *real* not relative, a part of the syndrome of intestinal stasis and not its only important nor even a constant symptom. My reason for taking so much of your time on this point is that I have so often heard it made the basis of irrelevant argument.

A few years ago, in Guy's Hospital, I saw Mr. Lane do his big bowel removal and the first deliberate ileosigmoidostomy for constipation that I had seen, and because I expressed a doubt as to its being warranted for the condition he very graciously gave me the freedom of his wards with the privilege of questioning both his patients and his nurses. I became convinced of a number of things: one, that the colectomy was a child of enthusiasm surpassing the ideal almost to the point of fanaticism, because of its necessarily high mortality absolutely unjustifiable in a greater number of the cases in which employed; that ileosigmoidostomy had enough of good in it to justify its occasional performance, and further, that there should be an operation more easily and safely done which would have advantages over the Lane anastomosis; that another good was the stimulus it gave to the study of intestinal stasis and its results, which so long had been considered by the masses of physicians only in its single manifestation of habitual constipation, the treatment of which had become as a matter of fact almost routine in its half-hearted and endless dosing, a source of regular income but an annoyance to even the most ardent, and further, that unless this newer surgery offered something either by actual relief or by paving the way to a better understanding of the condition, its treatment bade fair to stand

on a level almost with that of a few other diseases which have made no advancement in their results since the diseases received their name and diagnosis. It has already done the one great good, it has stimulated to deeper study and brought to light, together with the aid of the Roentgen ray, various hindrances to the proper performance of bowel function, until all are familiar with Lane's lines of crystallization, with Jackson's, Jonnescoes, Treves and various other membranes; and it is upon your familiarity with these known conditions, not within the scope of this paper to describe, that I presume to take issue with those who oppose surgery for the relief of those patients, who, having exhausted the good of the medical treatment, old and new, cascara, salts, castor oil, A. S. & B., licorice powder, Russian oil, rest in bed with the hips up or down, massage, osteopathy, duodenal feeding, fattening and attempts at the practical utilization of that beautiful piece of imagery Coffey's shelf, etc., come to us depressed of body and mind, old beyond their days, clinical symptoms and Roentgen ray revealing that they who run may read the resultant evil and the mechanical departures from normal, impossible of adjustment other than by direct mechanical means.

I can do little but touch upon the conditions most commonly met and the procedures necessary to correct them. It is well to mention now and to remember all through that ptosis, often general, but particularly of the transverse colon, usually accompanies a long standing intestinal stasis although it is comparatively seldom the seat of actual stasis.

It was under the mistaken conception of ptosis as an entity, instead of as a part of the syndrome, that the very difficult and dangerous operation, consisting of lifting up the viscera and fastening them to the anterior wall by the stomach, mesentery and hepatic ligaments was devised; fortunately it has not been widely employed; and it was largely from this same misconception that the various plications of the lesser omentum and the middle colonic mesentery were practiced. Even were higher support always the prime factor in the correction of the trouble, peritoneal supports are notoriously yielding and it is unreasonable to expect a swinging peritoneal strap to hold up the pounds of weight involved in keeping the colon up under the severe jerks and pulls of automobile riding and the upright posture. Further, I do not believe that a ptosis unaccompanied by a general intestinal myasthenia is of much importance except in the presence of fixed acute angles, in which case the natural tendency of the condition is to grow worse because of the inflammation produced near the points of angulation and the multiplication of new adhesions.

It may be taken as a principle that the fixation of any normally movable part of the bowel is dangerous. This applies with special force to the practice of plication and fixation of the cecum, particularly after work in the pelvis, because of the danger of adhesions forming within the terminal eight or ten inches of the ileum, binding it deep in the pelvis and producing a straight, narrowed length of gut, so fixed at both ends as to inhibit, or as in two cases that I have seen, prevent peristalsis. If we were sure there would be no adhesions following our operation this would not be a real danger, but when we can positively say that we will not have these adhesions we will have almost reached the end of the rainbow.

After enteroptosis, Lane's kink was one of the earliest sought for as a routine of the mechanical obstructions when invading the abdomen. No one doubts the wisdom of correcting it even though that correction brings disappointment in its result more frequently than otherwise, because Lane's kink is only a part of the trouble, a single manifestation of stasis of the ascending colon and a reflex irritation of the duodenum and upper jejunum, exciting them to a secretion of poisonous products similar to those found in acute dilatation of the stomach, which being absorbed in the large bowel produce profound toxemias. So that the relief of Lane's kink, because it is easy and safe, may be classed among the justifiable but usually inadequate procedures.

Putting Jackson's veil so prominently into the limelight has done much good through the various studies it excited as to its being a new membrane, an adhesion with anomaly of colon rotation, a type of congenital support and so on, leading to a now accepted fact among roentgenologists and surgeons that the seat of the stasis proper, in the vastly larger number of cases, is in the cecum and ascending colon and at the hepatic flexure. Although it is true that we have not yet learned in many cases which the cause and which the effect, whether the stasis is due to the adhesions or colitis, or whether the adhesions are the result of a primary stasis, we

do know that the stasis exists and that the systemic infection is the result of that stasis, and we know that points of membranous attachment outside the bowel mark corresponding points of colitis inside. Such being true in a given case of intestinal stasis, coming to us after exhausting the resources of medical therapy, what is the indicated plan of procedure? Obviously it is to drain in some way that part of the bowel which while retaining its power to absorb, has its propulsive power so inhibited that it is in fact less a gut than a large fecal bladder.

Small constricting bands are easily dealt with but despite all of the talk about the simplicity of stripping up a large membranous veil, it is often extremely difficult or even impossible to do and involves extensive traumatism with no assurance that new and more vicious adhesions will not immediately be formed. It is a procedure of limited usefulness and though the least often meeting with objections by surgeons, is, case for case, one of the most dangerous operations I shall mention.

Lane's ileosigmoidostomy provides the essential drainage in a round about way; it acts as a continuous enema and upon this depends its virtue, but it has been shown that often, after a time, the terminal six inches or so of the anastomosed ileum dilates and takes on the character of the colon, its contents becoming semi-solid, after which the cecum is no longer irrigated and the effects of the operation become negative or even pernicious. The anastomosis of the most dependent portion of the cecum to the rectum or sigmoid, as advocated by J. R. Eastman, technically a refinement, and practical application of the Giordano-Bergmann operation have not these objections; they do not interfere with the lieocecal valve, but drain the cecum irrigate the large bowel and permit the fecal current to go in either direction and by this drainage bring about a restoration of smoothness to the mucous membrane, and power to the muscle of the ascending colon, as demonstrated by subsequent Roentgen ray examinations, which show that in spite of gravity opposing, the bismuth column shows the fecal current being lifted in its normal direction. The operation is easy and safe. I use a fold of rubber dam over the outside blades of the anastomosing forceps, making it practically an extraperitoneal operation.

The resection of the entire ascending colon and the anastomosis of the ileum into the transverse colon, as illustrated by Mayo at the last meeting of the A. M. A., was done in each instance for the relief of constipation amounting to obstipation, distinctly due to neoplasm of the cecum or ascending colon, consequently merits little place in the consideration of this subject except that the results claimed are confirmatory of the good we would credit to simpler and less dangerous methods. It made a good wedge to get in with but displayed a keener interest in the fattening of cattle than it did a knowledge of the subject under discussion.

Where the cecum and the sigmoid do not lend themselves readily to apposition and even where such apposition is easy, yet the double barrel of the ascending and transverse colon is very closely welded, I have adapted the principle of the Finney pyloroplasty, throwing the lumen of the two portions of the bowel together for two or three inches below the hepatic flexure, ablating the angle entirely and permitting the cecum and colon to spill their contents into the transverse colon, which, as I have stated before, in spite of its marked desensus, is not often the seat of harmful stasis. The operation is quickly, easily and cleanly done with a McGraw ligature if for any reason time becomes an unusually important factor.

I make the knot through a small opening in the bowel, tying it with a tape to which is attached a small glass bead, making it easy to find the rubber in the stool. The same operation could be employed at the splenic flexure, though it must seldom be indicated and would certainly be more difficult. I have never had occasion so to use it.

I have had no reason as yet to regret using the McGraw ligature, but one certainly feels less at ease for the first few days and preference should be given the suture. These operations do not throw the colon out of commission nor interfere with any part it may play in the process of nutrition.

In doing these operations one should never neglect the division of a little deep band almost always present high in the extreme angle of the ascending and transverse colon. Failure on this point will result in an undue percentage of disappointments with the operation. The sigmoid of such redundancy as to necessitate its resection has not come under my observation in my own work and very seldom have I felt the necessity of a sigmoidopexy.

What are the objections advanced to these operations? One, that they are unphilosophical and illogical, certainly a dogmatic assertion with the personal equation uppermost. Harder still the bald statement that those who do them have no knowledge or conception of the physiology of the colon, a statement which unfortunately we cannot deny in its entirety but it is a case of the pot and the kettle, neither have they.

I will travel a long way to the man who will guarantee me a full and accurate exposition of the physiology of the large bowel. We do not know it fully. We do not even know its dynamics; not even through substantiated knowledge by what process the bismuth or barium enema gets to the cecum.

It is said that we do not know the end results, the primary results are good but what will ten years show? The same could be said at one time of every operation of surgery.

It is argued that we are dark on the etiology of stasis. We are dark also on the etiology of gastric ulcer and dark on the etiology of Basedow's disease, but did that fact, coupled even with a 25 per cent. operative mortality deter the further surgical investigation of hyper-thyroidism? If it had, much good would have been lost to the world.

But these things aside, these patients come to us miserable, they leave us happy. Next to successful cataract cases they leave the happiest of any patients we have, and whatever may be said of one's logic, however wide astray one's philosophy, happiness and physiology are seldom widely separated. This fact is enough, but now it has been demonstrated that tissue can be kept alive indefinitely outside of the body. However, one of the essentials of the process is that provision must be made for the elimination of waste. Without this the tissue dies. This is a tremendous fact of physiology.

Can any one say that any procedure that provides for the normal elimination of waste from the human body, dying from the absorption of accumulated waste, without causing grave physical deformity or interference with nutrition, is either illogical, unphilosophical or unphysiological?

DISCUSSION

Dr. T. B. Eastman, Indianapolis: I believe that candor forces the admission that our ideas upon intestinal stasis are as yet rather chaotic, as a general thing. When we find so many remedies recommended, or so many technics recommended, we don't know much about the condition. This fact was well illustrated only last week at the meeting of the American Association of Obstetricians and Gynecologists. There were three or four papers read there upon intestinal stasis, all of them with different basic ideas. Dr. Pantzer, who, no doubt, will take care of himself later on, I believe feels that much of it is due to conditions in and about the appendix—adhesions, membranes, etc. Dr. Marvell and Dr. Robert T. Morris had some ideas, at least, about dilated colons, in which they took, if you will allow it, a "reef" in the colon with the hope that it would lessen the lumen, lessen the distention, and bring about results. However, they admitted that their experience was so limited that they had no conclusions to make. And as to the short-circuiting operation, the methods are almost without number. I have been slow to take up the short-circuit operation. I have done a few, and I cannot help but believe that the ceco-sigmoidostomy is the ideal operation, as mentioned by the Doctor in his paper here. It has one point which seems to me to be sufficient, and that is that it gives us the benefit of the ileocecal valve and all that that means.

Dr. H. O. Pantzer, Indianapolis: Dr. Eastman did me the honor to mention my paper on the occasion of the meeting last week. In citing the stand I took, I wish to say that on that occasion my paper was limited solely to the subject of cecal stasis and did not in any way regard stasis of the intestines elsewhere. I have one point to make here that is frequently, and has been by the essayist militated against, viz.: the release of pericecal adhesions and bands or membranes of whatever origin, congenital or acquired. As long as they constitute an obstacle to the physiology of the cecum, they should be relieved; and I wish to say that I cut all of these adhesions with a freedom that will startle the onlooker when he sees me do the work. We will not have this followed by the reformation of adhesions, provided we look to see that the after-treatment is ample to keep the bowel open, and. in that way, obviate the one source of the reformation in the stasis of the part. Stasis is definitely connected with the formation of these bands and membranes, with the other factor that the operator must eliminate—that of infection—and also that at the time of operation the work shall be done with forceps, and unnecessary handling of the bowel avoided. There is no need of stripping off the membranes, all that you have to do is to simply cut the scar tissue to have it retract. When we cut the scar in the wry-neck, we do not go up and down the whole

sternocleidomastoid to free it; we simply cut the scar tissue and have the natural forces at work to recede the ends. The same holds true with regard to these membranes that are of scar-tissue character and formation. You will be surprised to what extent the cutting of these membranes will give your patient relief, the bowel being again able to fit at right angles into the cecum; even while the patient is under your observation in the hospital, there will be great relief.

I want to say that up to the present time I have been on the fence looking for a case indicating to me recourse to colonic surgery, and I am not able to mention one here. I have not found it yet.

Dr. H. A. Duemling, Fort Wayne: The subject which was brought before us in such an admirable manner by Dr. Roope is one that has engaged our attention more particularly of late. Perhaps the ball was set in motion in our own country through the efforts not so long ago of one of the earlier exponents of the surgery of intestinal stasis. The man who will devise a scheme, whatever it may be, to prevent intestinal adhesions from coming on, as they so often do, after our ordinary abdominal manipulations, will make a mark as high as has been made in our profession by any one, and it seems to me that all the efforts that have been made in this direction have been as yet incomplete in their results. For instance, I myself have tried the flooding of the abdominal cavity with water and the sewing up of the abdomen with the idea of retaining there as much as possible. In connection with this, I want to say that the normal peritoneum is able to take up in twenty-four hours the number of pints of fluid equal to the number of pounds the body weighs, so that perhaps there is absolutely nothing in the fact that we fill this abdomen with water.

All of us have seen these cases, perhaps more frequently recently because our attention has been called to them, and perhaps some of us have had to do considerable thinking along this line, as has Dr. Roope. He brings forward some very nice things to consider in the treatment of intestinal stasis.

I note that Dr. Pantzer, if I understand him, says that these scar tissues will retract, and after an operation done under certain rules of asepsis will not tend to reform, as they have done in my experience commonly.

Certainly, as Dr. Roope has said, no more thankful and well patients leave our hands than these.

Dr. A. M. Hayden, Evansville: It strikes me that the secret of intestinal stasis is due to some abnormal condition of the large intestine. My experience in this class of work has been that we nearly always find some organic lesion interfering with the free movement of the large bowel. This is true in all cases, I might say, of intestinal stasis that I have had anything to do with. And, again, we sometimes find dilatation of the sigmoid flexure. It strikes me that the thing to do to overcome this is to relieve these adhesions that Dr. Pantzer speaks of. We find a great many bands of adhesions pulling the bowels out of proper relation to each other. We find kinks in them, bands pulling down the ileum, throwing it out of line with the ileocecal valve in many cases, and I have never been able to find a case of intestinal stasis in any of the cases that I operated where I could not account for the condition by pathological lesions. In nearly all of these cases, cutting these bands and relieving them or doing away with the pathological conditions, we have found would give perfect relief. Of course, I have never made any of these anastomoses that the Doctor speaks of, but I have frequently resected the cecum or a portion of the bowel and anastomosed the small bowel into the cecum or into the ascending colon above the cecum. I have done this in quite a good many cases. These cases always got relief, but in the particular cases where it was necessary to resect the cecal end of the colon and make an anastomosis, we found enough of pathological conditions to account for the intestinal stasis. I have found in these cases—and I have had quite a good many of them that it has been necessary to operate on—that they nearly always get relief of the intestinal stasis after the operation. As long as we kept them under observation, they had no further trouble with constipation.

Dr. A. P. Roope, Columbus, closing: The discussion on the whole has been so kind that I have not much to say, except to comment concerning Dr. Pantzer's remarks upon simply dividing the bands. As I stated, the narrow bands can be divided easily and you do not intend to do anything else, but where you have these membranes taking in the whole of the ascending colon I cannot believe that you do not run the danger of reformation of adhesions when you simply cut. It is not fair, quite, to liken the adhesions and reformation of adhesions or the process of elimination of these adhesions, to anything else. Wry-neck is not the same thing. The peritoneum has a way of its own that we cannot compare with any tissue outside; if it had to be compared, in my experience it has been that you could best compare it with Duputyren's contraction, where you have to take out all or you do not get results. I have had some experience with simply dividing these large bands and membranes, but it has not been happy.

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EDITORIALS

TYPHOID PREVENTION

The measures necessary to counteract the spread and eradicate typhoid fever are of two kinds, defensive and offensive.

Defensive measures are pasteurization of milk, filtration of water, sanitary sewage disposal, screening against flies and typhoid vaccination. Offensive measures are sterilization of feces and urine of typhoid patients, isolation of cases, detection of mild atypical cases and bacilli carriers, and the control of bacilli carriers.

Defensive measures alone will not lessen the number of cases more than 60 per cent. Offensive and defensive measures together will eliminate all but about 10 per cent. of cases.

Water and milk as the sources of typhoid infection have been much overestimated. Water and milk epidemics are fairly easy to recognize, and any health officer of experience can recognize them at once.

However, the vast majority of typhoid cases do not occur in epidemics but sporadically. It is these sporadic cases that offer the most difficult problems. It is here that we must apply our offensive measures. As every case of typhoid infection must come from a previous case, the health officer should try to decide definitely the source of this particular case and not be satisfied with a mere superficial examination of the milk and water supply. Man is the primary source of typhoid bacilli; milk and water are only secondarily contaminated and play only a passive part in the spread of typhoid.

The following information should be obtained in every case of typhoid:

Name, age, sex and occupation of patient; onset of disease; Widal reaction, whether positive or negative; whether patient has been away from home fifteen days previous to onset, and if so, where, and give name of family visited; source of water supply, whether wells, springs or city water; source of milk supply, naming dairy; whether patient has been associated with typhoid; whether there has been a case of typhoid, influenza, acute gastritis, gastroenteritis or neurasthenia in the patient's family within the last two or three years; and whether the patient's mother has ever had typhoid.

It is possible in over 60 per cent. of all sporadic cases to definitely locate the source of infection. After the source of this particular case has been decided on and future infection from that source prevented, it is necessary to prevent other persons from being infected from the present case. To accomplish this the following rules should be observed:

1. Isolate the patient.
2. A trained or experienced nurse, who knows that typhoid is contagious and knows how to prevent future infection, should be obtained to take care of the patient.
3. No one taking care of patient should be allowed to prepare food for any one else.
4. Sterilize feces, urine, eating utensils, clothing and bedding of patient.
5. Nurse or person caring for patient should sterilize hands before each meal.
6. After recovery of patient feces should be examined repeatedly to determine whether typhoid bacilli are present or absent.

The offensive measures against typhoid are much more difficult to carry out than the defensive measures.

As offensive measures become more and more successful, the defensive measures must be made more and more nearly perfect. Where typhoid is endemic most people have the disease in a very mild form during childhood, so that if all the members of such a community are exposed to a severe milk or water infection not more than 10 per cent. of the people will develop typical typhoid. Where typhoid is introduced for the first time into any given community a large majority of the members of that community will have a typical attack.

The Widal test should be made on the blood of every suspected case of typhoid to definitely determine whether it is typhoid or not, and that it is not tuberculosis, paratyphoid or some other acute fever. It should be remembered that an absolutely accurate diagnosis cannot be made in all cases without the Widal.

PTOMAIN POISONING

A ptomain poison is any one of the active inanimate septic or toxic substances resulting from processes of decomposition and disintegration of albuminous materials. As ptomains are

chiefly developed during putrefaction, they have been termed putrefactive alkaloids. The dependence of ptomains on micro-organisms may be indirect and complicated by or dependent on purely chemical changes. The kind of ptomain produced depends somewhat on the stage of putrefaction, as ptomains are transition products in the process of putrefaction. Thus we see that ptomain originates as the split products of the albumin molecule in the digestion of proteids. There is nothing specific about ptomain production by bacteria. It is now fairly certain that somewhat similar toxic substances are produced in the intestines of man during proteid digestion.

If typhoid bacilli are grown in ordinary broth two sorts of toxic substances are produced, one which is free in the broth as the result of proteid digestion by the bacteria, and the other in the body of the typhoid bacilli. This last-named toxic substance gives rise to typhoid symptoms when taken into the human body.

Bacteriologic investigations of many epidemics of ptomain or food poisoning show that they are due to infection with a number of different varieties of bacteria practically all of which belong to the paratyphoid group of organisms. In a very large percentage of cases the infection originated from eating meat or meat products containing paratyphoid bacilli.

Cholera and typhoid bacilli are bacteria whose characteristics are well fixed in their pathogenicity, while the paratyphoid bacilli are not and may exist in a somewhat saprophytic condition outside the body of men and animals. Paratyphoid bacilli are pathogenic for animals as well as human beings, and are present as mere saphrophytes in mice, rats, etc.

There are two varieties of paratyphoid fever:

1. Typical forms resemble typhoid; duration, seventeen days; mortality, 1 to 3 per cent.

2. Gastro-enteric form of cholera nostra. The symptoms are caused by eating food containing large number of paratyphoid bacilli and their toxins. The incubation period varies from two to forty-eight hours after eating contaminated food. However, the incubation period is usually from ten to eighteen hours. The mortality is from 3 to 15 per cent.

This latter form of infection is due to eating meat infected with the paratyphoid bacilli which was insufficiently cooked, or if well cooked was later infected with these organisms. The infected meat comes from sick animals, that is, cholera hogs, septicemia of cattle, navel infection of calves, enteritis of cows and calves, metritis and mastitis of cows, peritonitis, pericarditis, osteomyelitis and suppurative pleuritis of cows, hogs, sheep and often of chickens, ducks, geese or turkeys.

The diagnosis of meat poisoning is made by bacteriologic examinations of stool, blood and urine, or agglutination tests of the blood. If any of the suspected food can be obtained it should be examined bacteriologically for the paratyphoid organisms.

To prevent paratyphoid fever, the same measures must be taken with regard to human contact, filtration of water, sanitary disposal of feces and urine and pasteurization of milk as in typhoid. Careful slaughter-house inspection, antemortem and postmortem, careful regulation of the preparation of all ground or prepared meats are necessary. Cleanliness must be observed in the preparation of all meats and careful refrigeration must be imposed.

The eating of ground meats or salads containing meat products is a very questionable practice during the summer months.

RESULTS OF SURGICAL INTERFERENCE IN GASTRIC CARCINOMA

Important facts in regard to cancer ought to receive the widest publicity, for cancer is a subject in which not only the medical world but all humanity is vitally concerned. New facts when brought to light as a result of the studies of investigators should be brought home to our adult population. Attention must therefore be called to some striking facts in regard to gastric carcinoma emphasized by Bloodgood in his presidential address before the Gastro-Enterological Society and published recently in *The Journal of the American Medical Association.*

The most significant finding in his analysis of 184 cases of cancer of the stomach was that in only 26 per cent. was the disease operable, and that in 74 per cent. it was inoperable. In other words, three fourths of the patients came up for surgical cure too late. If that is true generally, what a deadly disease gastric cancer must really be at the present time!

Cancer is a curable disease provided it is recognized and properly treated in its incipient or early stages. That is the one great fact that must be impressed with the greatest emphasis on our adult population. The longer operation for the cure of cancer is delayed, so much more deadly does the disease become. When a cancer of the stomach has been allowed to advance to

the stage where the symptoms are many and the clinical picture is quite typical, a cure is not to be expected.

Cancer of the stomach must be operated on early. To attain such an end the individual ought to present himself for examination and diagnosis at the first warning. The responsibility then falls on the physician. While it cannot be denied that in many cases the diagnosis does not occur to the attending physician until too late, in the vast majority of cases the trouble is that the patient waits too long before seeking medical advice.

Our lay population—as well as our medical colleagues—should be impressed with the great importance of acting at the first flash of the danger signal. This signal, according to Bloodgood's analysis, is epigastric discomfort aggravated by eating solid food. The idea can best be conveyed in his own words: "Our adult population must be informed, with the highest authority behind it, that epigastric discomfort aggravated by eating solid food is a sufficient warning. They must be told that such symptoms by no means means cancer, or disease that may ultimately end in cancer, but that with these warnings they should seek not treatment, but a thorough examination by a competent physician trained in the investigation of gastric diseases. They must be informed that restricted diet and some medicine will often give them relief; but if the disease is cancer, or something that may ultimately be cancer, such relieving treatment will only increase the danger. A thorough examination is the essential thing, and they must know that a thorough examination consists of repeated gastric analyses and the investigation with the fluoroscope or roentgenograms. No other examination will be sufficient."

More statistics of this sort and suggestions based on such statistics are needed urgently in educating our people to assume the proper attitude toward malignant disease. If more men from the various clinics throughout this country and all over the world would muster up courage enough to analyze their clinical material with the view of giving the widest publicity to their figures showing the deplorable results of surgical measures in cancer of the stomach because of late interference a most effective weapon for our campaign against cancer will have been obtained. Our profession and all humanity owes Bloodgood a great deal for his courage in having undertaken pioneer work along this line.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

Do you want to move to another location? Or have you anything to sell? If so, do not fail to read the commercial announcements on adv. p. xxix of this number of The Journal.

During July the following article has been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies: Merck and Co.: Betanaphthol Benzoate.

Oral hygiene is prominent these days and the physician who does not take into account the oral cavity in making diagnoses is hardly abreast of the times. Caries and pyorrhea should be considered in all somatic and phrenic disturbances.

Shall we do nothing for the 70 per cent. of schoolchildren who are sick or suffering from physical defects? Further, shall we do nothing for the 2 per cent. of the whole population who are mentally defective? If we continue to do nothing or next to nothing in this matter, will not that sin of omission mark us as highly extravagant and incompetent?

Chicago is putting its clinics in the limelight through the publication of bi-monthly volumes called "The Medical Clinics of Chicago." The Clinics will be devoted exclusively to internal medicine. Undoubtedly this enterprise will prove of interest to a large number of physicians who are familiar with the excellent medical work that is done in the "Windy City."

Delinquent physicians, by which is meant those who do not promptly report deaths, births and contagious diseases, are on the decrease in Indiana. Still a few persist. These nonreporting doctors violate the laws of the state, fail to perform their duties to their patients, to the public and to medical science. It is the hope that the law-violating physician will soon be extinct in Indiana.

The Jennings County Medical Society has raised its dues with a view to securing money to fight medical quacks and pretenders. If

every county medical society in the state would follow the example and put forth a united effort to stamp out quackery it would not be six months before the state would be purged of a horde of medical imposters who illegitimately profit by the ills of humanity.

The Peru Garbage Ordinance is working. We learn from a recent issue of the Peru *Journal* that four men violated the ordinance by permitting their garbage to be exposed, exposure of the garbage to flies being a violation of the ordinance. Mayor Hammond levied the minimum penalty, $5 and costs, against the four violators, and it is believed these men and others inclined like them will hereafter cover their garbage and by so doing end their bad citizenship.

Disease through milk is not a new story, but Dr. M. J. Rosenau, Professor of Hygiene in the Medical Department of Harvard University, has brought the matter forcibly before the public again in a public address recently delivered at Syracuse, N. Y. He says: "Diseases that may be inoculated by milk are tuberculosis, diphtheria, scarlet fever, milk sickness, foot and mouth disease and septic sore throat." The last disease he considers the most serious.

"Here is some hot water," said the farmer's wife to the surgeon, "in which to sterilize your instruments." The surgeon had called to perform a minor operation on the good woman's child and she wanted to be certain the instruments were sterile. It was unnecessary for the surgeon to ask her for the hot water. Afterward, the surgeon, an up-to-date man, said: "The slow doctors must take notice from this that the people will not tolerate dirty surgery, and I might add, ignorant and careless doctoring."

Compulsory Sickness Insurance is certainly a good thing and has reached its greatest development in Germany, Great Britain and Russia.

However, ill results may appear, as they did in the case of a workman who said: "I don't care if I do get sick; I'll be cared for, and I'd like to take a rest anyhow." Perhaps it would be better to give a reward to those who keep themselves well for, say a period of ten years. By that time this keeping-well habit would be thoroughly established and bring itself a magnificent reward; the small money prizes could then be discontinued.

Prevention first might well be the slogan of the charity and social workers. The troubles they try to overcome proceed largely out of disease. Therefore, to cure or remedy our many social troubles so far as may be, prevents disease. It is difficult to build a house from the top downward. To prevent runty specked apples, spray the trees at the right time. No amount of wrapping in tissue or treating with drugs will make runty, woody apples large and sound. Regeneration of the race cannot be accomplished by multiplying asylums and relief organizations.

Secretary Combs announces that the tabulated Councilors' reports will appear in the September number of The Journal, but he also announces that unless the ten councilors who so far this year have failed to make complete reports send in their reports before August 25, the councilor report will occupy very little space in The Journal. This would be real economy for The Journal, which spends considerable money each year in putting the tabulated councilors' report into type, but is it justice to the various councilor districts that are entitled to know what their councilors are doing?

"Some day, in a flyless and mosquitoless future, people will be unable to understand why flies and mosquitoes were ever tolerated. Didn't you have a board of health in those days, they will inquire, and what will we say?" The above quotation from the Kokomo *Tribune* shows the writer has vision. Victor Hugo, writing in the fifties, said: "Some day in the future the world will say: 'What, we had kings! What, we had slaves!'" Here was another man with vision. Slavery has gone and kings are going. We suggest to the editor of the *Tribune* he could well extend his vision and say: "The time will come when people will ask: What, we had consumption! What, we had typhoid fever! What, we had all manner of infectious and contagious diseases!" (Hurty.)

The secretaries of the county medical societies will be tendered a dinner at the Claypool Hotel, Indianapolis, at 6:00 p. m. on Thursday, September 23, in connection with attendance at the annual session of the Indiana State Medical Association. The dinner will be followed by a short program of practical talks on organization work and other subjects of interest to secretaries. The expense of the dinner is borne by the Association in accordance with a reso-

lution to that effect passed at the last meeting of the House of Delegates. It is expected that a majority of the county secretaries of the counties of Indiana will attend this dinner, but with a view to knowing what number to provide for, those who expect to attend the dinner should notify Dr. Earl Van Reed, LaFayette, Ind.

As usual we are having difficulty in securing reports and announcements from officers and committees who are to furnish the same for publication in the September number of The Journal, which will be a special number to advertise the annual session of our association. With a whole year for the collection of data it would seem that the members of committees ought to be able to get their reports prepared on time, but with characteristic procrastination some doctors put off work until it is too late to do justice to themselves or the work entrusted to them. However, printers will not wait for belated copy if The Journal is to come out on time, and if the "Indianapolis Number" fails in efforts to publish all of the reports and announcements connected with the coming session of the Association it will be the fault of those who are expected to cooperate in having the special number complete in everything that goes to make up the official announcements of the annual session of our association.

The preliminary program of the coming session of the Indiana State Medical Association indicates that an unusual effort has been put forth by President Wynn and the members of the Scientific Committee to secure a program that offers unusual attractiveness to medical men who are looking for the presentation of advanced work in scientific and practical medicine. For one of the general sessions the speakers will be Drs. W. J. Mayo, of Rochester; E. C. Rosenow, of Chicago; and C. C. Bass, of New Orleans. The Eye, Ear, Nose and Throat Section will have as its guest Dr. Casey A. Wood, of Chicago, who will present the principal address for that section. In addition to the excellent list of papers that will be presented, President Wynn has an innovation for the coming session in the way of a series of round-table discussions and demonstrations of intensely practical value. No member of the Association can afford to miss the session. It is expected that the complete program and all announcements will appear in the September number of The Journal.

The medical profession can blame itself for the growing tendency on the part of the public to give credit to certain nonmedical persons for having a sufficient amount of technical knowledge concerning medical affairs, and in particular public health affairs, to occupy positions which according to all the rules of good judgment should be filled by medical men of experience and broad judgment. Too long have we calmly watched usurpers, with their pretended knowledge, secure, through political activity or otherwise, positions that rightfully belong to medical men. While it is true that constantly we are making it more difficult for medical men to comply with all the requirements demanded of those who practice medicine along the highest ethical and legitimate lines, yet the horde of pretenders who also are permitted to practice and assume the same relative positions as occupied by a legitimate practitioner, are on the increase. There should be a general awakening and more solidarity of the medical profession in efforts to effect reforms. There is no good and sufficient reason why laymen should occupy salaried positions on boards for the study of tuberculosis, or as members of boards interested in medical affairs requiring technical knowledge for proper operation. If the medical profession exercised the influence that it should exercise, less recognition would be given to the pretenders who are trying to fill the shoes of medical men.

Early diagnosis of tuberculosis is absolutely essential if any cures are to be made. Dr. Lawrason Brown of Saranac Lake, the well-known scientist and practical worker in tuberculosis, says: "Anybody can diagnose consumption in the late stages after the disease has progressed to the point where there is frequent coughing, much sputum, fever, sweats and a flushed face, even a careless doctor will know it, but a diagnosis at that stage is not worth much to the sick man." The above statement is absolutely correct. Dr. Brown knows what he is talking about. Further, Dr. Brown says: "In my opinion, consumption should be diagnosed not only before there are bacilli in the sputum, but also before the physician can find any signs in the chest." He contends that whenever a person has been exposed to tuberculosis infection, especially in childhood, and who later passes through any debilitating experiences and then develops a little fever, has a little cough, tires easily, loses color and loses a little weight, a diagnosis of probable tuberculosis should be

made, even though a physical examination shows no sign of consumption in the lungs, and there is no bacilli in the sputum, if there is any sputum. This probability is increased if the person is 10 pounds below the average weight for height and age, and if he has a pulse that is a few beats, say 10, faster than the average. From this it is obvious that Dr. Brown puts the history and a general sizing up of the situation above all other factors in making a diagnosis of the very early stage of consumption. When we find bacilli in the sputum that sign comes rather late. The patient is probably doomed, and it is further true that symptoms are a better and more accurate guide to activity than physical signs.

DEATHS

Osmer I. Reasoner, M.D., of Muncie, died August 9, aged 62 years.

E. P. Harrison, M.D., died at his home in Rockport, August 2, aged 70 years.

George H. Searcy, M.D., died July 23 at his home in Muncie, aged 50 years.

Frank H. Bent, M.D., of Kokomo, died at Methodist Hospital, Indianapolis, July 6, aged 37 years.

Lawrence B. Bitz, Jr., M.D., died at Evansville July 11, aged 34 years. Death was due to tuberculosis. He was a son of Dr. L. B. Bitz, of Evansville.

Sherman K. Ingle, M.D., University of Indiana 1909, practitioner of Evansville, died in Hot Springs, Ark., July 1, of chronic interstitial nephritis, aged 41 years.

Mary E. Jackson, M.D., of Hammond, died July 8 at the Norwegian Deaconess Lutheran Hospital, Chicago, following an illness of several weeks, aged 58 years. Dr. Jackson was the wife of Dr. L. D. Jackson.

Lester H. Painter, M.D., formerly a practicing physician of Middletown, Ind., but for the past ten years located at Dallas, Tex., died August 1 at the home of his sister at Muncie, Ind., aged 44 years.

George J. Studor, M.D., of Fort Wayne, died July 1, from Bright's Disease, aged 31 years. He was a graduate of Wabash College and the Indiana Medical School, and a member of the Indiana State Medical Association.

James E. McEvoy, M.D., died at his home in Ft. Wayne July 7 following a three days' illness, aged 41 years. Dr. McEvoy was born in Kalamazoo, Mich., in 1874, graduated from a college in Sandwich, Ont., and entered the old Fort Wayne Medical College. Following his graduation from this institution he became intern at the Indiana State School for Feeble Minded Youth, and later served as a member of the faculty of the Fort Wayne Medical School. He was a member of the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Annette Lenn, widow of Dr. O. A. Lenn, of Newburg, died July 20, aged 47 years.

Dr. and Mrs. C. E. Day have returned from a fishing trip in northern Indiana.

Josephine Bobbs, widow of Dr. Andrew Bobbs, of Marion, died July 26, aged 68 years.

Perry B. Bowser, M.D., for a number of years inmate of Soldiers' Home at Marion, died July 20.

John W. MacCammon, M.D., of Indianapolis, died August 7, from tuberculosis, aged 38 years.

Dr. and Mrs. Harry Langdon have gone to Berkeley Springs, W. Va., where they will spend the month of August.

Dr. and Mrs. John M. Cunningham are spending several weeks at Colorado Springs, Colo.

Dr. E. H. Clauser, of the City Hospital, was married July 22 to Miss Marjorie Lewis, of Pendleton.

Dr. John M. Kitchen, oldest surviving member of the Indiana State Medical Association, celebrated his 89th birthday anniversary on July 12.

The mariage of Dr. William F. Molt to Miss Olive Richards, supervisor of nurses at the Long Hospital until June, was solemnized at Boston, Mass., July 6.

Dr. J. McLean Moulder has resigned as superintendent of the Methodist Hospital and the place has been filled by Dr. Charles S. Woods, former city sanitarian.

Two new and complete X-Ray outfits are being installed in Indianapolis hospitals. The City Hospital chose the Kelly-Koett machine, while the University Hospital selected a Victor Transformer.

Dr. Daniel W. Layman, at the June meeting of the American Laryngological, Rhinological and Otological Society held in Chicago, was unanimously elected a member. To become a member of this society it is necessary that the candidates present a thesis which is passed on by the Council. The subject of Dr. Layman's thesis was "The Treatment of Nasal Accessory Sinus Diseases."

The following additions to the teaching staff of the department of Medicine, Indiana University, has been announced by the Board of Trustees: Dr. B. D. Turner, assistant professor of Pharmacology and head of the department; Dr. Fernandez, associate in Pathology; Mrs. Ethel Clarke, superintendent of nurses at the Robert W. Long Hospital, who fills the position left vacant by the resignation of Miss Alice Fitzgerald.

Attention is called to members of the Indiana State Medical Association that a dinner will be given Thursday evening, Sept. 23, at 6 o'clock at Claypool Hotel. Addresses will be made by Drs. W. J. Mayo, C. C. Bass and E. C. Rosenow. Tickets will be $1.50, and must be obtained before noon of above date. Members should secure tickets when registering, or address Dr. J. A. Pfaff, Newton Claypool Bldg., prior to that date.

The Younger Physicians Club held its annual outing this year on Wednesday, July 28. The Club with wives and children were guests of Dr. and Mrs. David Ross at their summer home on the banks of White river, two miles north of Broad Ripple. About 150 persons were present and the occasion was a milestone in the social enjoyment of Indianapolis physicians and their families. Baseball, quoits and bathing were the games indulged. A generous buffet dinner in which fried chicken, country style, played the leading role was served. Dr. Lehman Dunning was elected president and Dr. Herbert Wagner secretary of the Club for the coming year.

A Dr. Francis O. Dorsey Memorial, in the form of a special operating room at the Indianapolis Orphan Asylum, 4107 East Washington Street, will be established through the gift of $800 to the Home for this purpose by Frank H. Wheeler. It was Mr. Wheeler's request that the operating room be made a memorial for Dr. Dorsey who died recently. Dr. Dorsey was one of the best known and most popular physicians of Indianapolis, and his friends are much pleased to learn that there will be such a memorial for him. The money given by Mr. Wheeler will be used in altering a room and fitting it up for surgical purposes and for equipment. The equipment of the room will be under the direction of Dr. Daniel W. Layman, who was a close friend of Dr. Dorsey. The Directors of the Home will begin the improvement at once.

GENERAL

Dr. C. S. Bohn has re-located at Chrisney, Ind.

Dr. A. B. Thompson has left Chrisney and located at Lake, Ind.

Dr. E. E. Israel, of Geneva, and Mrs. Callie Allen were married July 1 at Dildmore, N. C.

Dr. K. S. Strickland, formerly of Owensville, has located at Mt. Vernon.

The contract has been let for the new Grant County Hospital to be located at Marion.

Dr. A. E. Ross and family, formerly of Converse, have located at Janesville, Wis.

A son, Hubert Emmet, was born June 21, to Dr. and Mrs. J. W. Strange, of Loogootee.

Dr. S. C. Murphy, of Warsaw, has been taking a special course in surgery at Chicago.

The first annual picnic of the Sullivan County Medical Society was held at Mann's Grove July 7.

Dr. S. T. Henderson announces that he has installed a modern and complete X-Ray Laboratory in the Gauntt Building, Fort Wayne, Ind.

Dr. C. T. Zaring, of Greencastle, has returned from Seattle, Wash., where he attended a national meeting of Shriners.

Miss Cornelia F. Meade, of Bedford, Va., has succeeded Miss Ethel Chisholm as Superintendent of Union Hospital, Terre Haute.

Dr. Henry B. Marsh, former practitioner of Indianapolis and Crawfordsville, died July 22 at St. Augustine, Fla.

Dr. E. M. Bennett, a 1906 graduate of the Indiana Medical College, has located at New Ross, Ind.

Drs. Samuel and Ella Hollis, of Hartford City, are taking an extended tour through the West.

October 4 to 9 has been named as "Baby Week" in Indianapolis by the Infant Welfare Bureaus of that city.

Dr. Frank P. Hunter is the new intern at the St. Elizabeth Hospital, LaFayette. He is a graduate of the University of Michigan.

Dr. H. E. Elliott, of Brazil, is spending the month of August at Rochester, Minn., doing post-graduate work at the Mayo Clinics.

Dr. H. H. Kamman, of Columbus, suffered a broken arm and dislocated shoulder while attempting to crank his automobile.

Dr. C. H. Emery, wife and children of Bedford, have returned from an extended trip through the West.

Dr. C. D. Ross, of Michigan City, was married early in July to Miss Laura Kline, of Chicago.

Dr. H. H. Martin, of LaPorte, has been named a surgeon of the New York Central Lines.

Dr. Chas. E. Phipps, of Muncie, was elected surgeon of the United Spanish War Veterans at their recent meeting at Indianapolis.

Dr. D. A. Pettigrew, who for the past few years has not actively engaged in practice, has opened offices at Winimac, Ind.

Dr. and Mrs. Joseph D. Heitger, of Bedford, announce the birth of a daughter, Katrine Everbach, on July 20th.

Dr. George Morris, of Petroleum, has returned from Boston, where he has been taking post-graduate work at Harvard.

Dr. D. A. Holiday and wife, of Fairmount, have gone to Colorado for an indefinite stay for the benefit of the doctor's health.

Dr. George F. Butler, of Mudlavia, has been making an extended trip through the East.

Dr. Rodney E. Troutman, of Logansport, has succeeded Dr. Clarke Rogers as secretary of the City Board of Health. Dr. Rogers has located at Indianapolis.

Dr. Chas. A. Hunter, of Seymour, was quite seriously injured and his automobile destroyed when struck by an interurban car on August 2.

The partnership existing between Drs. E. R. Baldridge and A. E. Rhein, of Rosedale, Ind., has been dissolved, Dr. Baldridge retiring from practice.

Dr. J. C. Arthur, well known botanist of Purdue University, will retire September 1 from active duties and become professor emeritus of the institution.

Dr. Mary A. Priest, the first woman graduate of the old Fort Wayne College of Medicine (1880) died at Portland, Ore., aged 72 years.

Dr. George Menges and family, of Elkhart, are spending the summer at Eagle Lake, the doctor going back and forth from Chicago taking post-graduate work.

Dr. J. Z. Powell, of Logansport, was operated at St. Vincent's Hospital, Indianapolis, July 10, for gall stones, and is improving nicely.

Dr. C. C. Rayl, of Monroe, who has been ill for several months, is so far recovered as to be able to re-open his office and take care of his practice.

Dr. George W. Spohn, of Elkhart, was reelected secretary of the Tri-State Medical Association at their recent meeting at Ann Arbor, Mich.

Dr. C. C. Sourwine, of Brazil, contracted blood poison in his left hand last March, and since that time has undergone six operations, the last one July 17, to break up adhesions.

Dr. Arlie J. Ulrich, of Aurora, 1915 graduate from the Indiana University School of Medicine, has been appointed intern at the Robert W. Long Hospital, Indianapolis.

Dr. and Mrs. H. C. Haas, and daughters, of Peru, left about July 1 for California. Dr. Haas has returned, but the family will remain for the remainder of the summer.

Dr. Chester Frazier, recently graduated from the Indiana University School of Medicine, has located at Fort Wayne in connection with the practice of Drs. Porter, McCaskey and Weaver.

Drs. A. C. McDonald, C. Norman Howard, C. C. Dubois, G. W. Anglin, and S. C. Murphy, of Warsaw, have combined their offices and will cooperate in the practice of medicine, each one specializing in certain fields.

Dr. Lydia Allen DeVilbiss, formerly of Ft. Wayne, but who for some time has been connected with the New York State Department of Health, has been named chief of the Division of Child Hygiene of the Kansas State Department of Health.

Dr. Herbert Bruner, recently graduated in medicine from the Indiana University School of Medicine, will be associated in the practice of medicine with his father and mother, Drs. Charles K. and Mary L. Bruner, at Greenfield, Ind.

The City Board of Health of Indianapolis has opened six infant welfare dispensaries where mothers will receive instructions as to proper methods of caring for babies, and from which the Children's Aid Association will distribute pure milk for infants.

Mrs. W. W. Mayo, widow of the late Dr. W. W. Mayo, founder of the Mayo Clinic, and mother of Drs. W. J. and C. H. Mayo, at present connected with the Mayo Clinic, died July 15 at Rochester, Minn. She was formerly a resident of LaPorte, Ind.

Dr. Clarke Rogers has resigned as secretary of the Logansport Board of Health and will locate at Indianapolis, being associated with Dr. Henry Jameson, Hume-Mansur Building. Dr. Rodney Troutman has been appointed secretary of the Board in Dr. Rogers place, and Dr. John Bradfield is the new member on the Board.

Dr. W. F. King, assistant secretary of the State Board of Health, together with his family, is spending the month of August in California. Dr. King will inspect the sanitation and health exhibits at the Exposition, and will deliver an address on August 17 before the National Educational Association.

The report has been circulated that Dr. John C. Irwin, graduate of the Indiana Medical School and an ex-intern of the Indianapolis City Hospital, was killed while on service in Europe. This report is in error and word has been received from Dr. Irwin that he is safe and well, but the Dr. John Irwin who was killed is an Iowa man and a graduate of Columbia University.

"The Live a Little Longer" General Committee has its headquarters in Rochester, N. Y. The secretary is Miss M. E. Bingeman. The said committee belongs to the Rochester Chamber of Commerce. It has representatives from the Board of Education, the Rochester Chamber of Commerce, Ministerial Association, Medical Associations and other organizations.

The American Public Health Association will meet in Rochester, N. Y., September 6-10. Official headquarters will be the Mechanics Institute. Prof. William S. Sedgwick, Boston, Mass., is president; Prof. S. M. Gunn, Boston, Mass., is secretary. When this association met in Indianapolis in 1900 the meeting was distinguished by the fact that ex-President Harrison welcomed the Association at the General Session and attended several regular sessions. The meeting was also distinguished by the fact that Major Reed attended for the first time and officiated the experiments by which the Yellow Fever Commission proved that mosquitoes carried the infection of the disease.

Precautions for Consumptives to Observe are prescribed by the Baltimore and Ohio Railroad before they will transport them. People having consumption and contemplating a railway journey before using the Baltimore and Ohio Railroad must first consult their physician or health officer who will give them instructions concerning the care they shall take while on the Baltimore and Ohio coaches. Such consumptive passengers are warned to carry an abundance of paper napkins and to cough into the same, each napkin to be carefully placed in a paraffin paper bag to be burned when convenience will permit. They are also to carry pocket sputum cups if the sputum is not received in paper napkins. A paraffin paper bag and an abundance of paper napkins seems to meet the conditions.

CORRESPONDENCE

RETAINED MENSES

To the Editor:—Maude R., one of twin girls, aged 14, came here under my care, April 1, from the care of Dr. Leiser of New York. A diagnosis of chorea had been made after three weeks' stay in a hospital, and with the proper treatment she was sent here for the sake of the quietness.

At my first visit I found an overfilled bladder, along with the usual history, and also symptoms of an aggravated case of chorea—swaying and swinging motions, twisting and turning and never still a minute. The sister had menstruated at 12, but Maude had had no show at all. This made me suspicious of retained menses, and examining I found a perfect projecting purple imperforate hymen. The rectal examination revealed a tumor pressing on bladder and rectum seemingly as large as a seven months' fetus' head. Three pints of urine was removed. A few days later Dr. Kresler, having anesthetized locally for me, I made a crucial incision in the hymen and took out 2 quarts of old blood. The uterus was held high in the abdomen, but gradually came down to the normal location.

The "chorea" has never reappeared to this day, and the girl is well and gaining flesh.

This simple case calls our attention more closely to reflex condition, and often we use Fowler's solution, when a close examination might reveal some local excitation. The menses are normal since the incision was made.

M. D. Gwin, M.D.

PUBLIC HEALTH

Does This State do all it can to protect the health and lives of its people? If it does not, what is the reason?

To Keep Undertakers Busy, neglect sore throats and call scarlet fever "red rash," and also wait for tubercle bacilli to appear in the sputum before the diagnosis of tuberculosis is made.

Hygiene is a Major Matter in the universities of France, Germany and Great Britain, but is neglected in the United States. The subject appears more or less timidly in the curriculum of all our medical schools, but at this time is a major subject in only five universities. Why have our universities failed to recognize the need of making hygiene major?

Fort Wayne has abolished 850 vaults. The Fort Wayne *Sentinel* states this has been done through the activity of Dr. J. H. Gilpin, city health officer. It states further, that Dr. Gilpin promises to increase this to 1,000 or more before the end of the present year. Continuing, the paper further states these vaults have been replaced by interior toilet arrangements of modern kind that are of approved sanitary design.

Lowell, Ind., stands back of her health officer. These are the headlines of the Lowell *Tribune*. In its article the *Tribune* says: "At the meeting of the business men recently it was unanimously decided to stand back of the local health officer in his efforts to improve the health of the town. This matter should not only have the support of business men, but every citizen should lend his aid." It is gratifying indeed to know that the business men of one town at last appreciate that the most important business is the business of the public health.

One Hundred and Twenty-Seven Babies out of every 1,000 babies born die before they are 1 year old. This is a bad record for Indiana, and is it not also somewhat of a reflection on the medical fraternity? Only through medical science can the facts in regard to the early death of infants be known. If 127 calves out of every 1,000 that were born were to die, there would be a great commotion among the farmers, bankers and all classes of people and our legislature would be horrified. When, however, this very fact was brought before the Indiana legislature, it only provoked a patronizing smile. We certainly live in a funny world.

Washing Butter with Polluted Water is declared against by Dr. G. W. Eddingfield of New Ross. He says: "I wish to call your attention to the fact that very frequently butter is washed with water from polluted wells. Doubtless by this means disease may be transmitted. Not a little of the country butter I buy has a flavor or taste that is foreign to it, and I suspect that frequently this foreign flavor or taste is due to the use of polluted water." Dr. Eddingfield recommends that an order or rule be passed by the State Board of Health in regard to this matter.

"I am Surprised and Vexed to hear my birth has never been recorded." These are the words in a letter to the State Board of Health from Henry R. Kendall of Woodleigh, Thundersley, Essex, England. Mr. Kendall, entirely for a business purpose and to prove his right to property, desired the legal record of his birth. The physician in attendance when he was born failed to make a record of the birth, and now Mr. Kendall finds himself in a bad fix when he attempts to prove his right to the inheritance of an estate. Doctors never know what harm they are doing to their patients when they fail to report births.

"Garbage," says the rule of the State Board of Health, "is refuse accumulation of animal, fruit or vegetable matter, liquid or otherwise, that attends the preparation, dressing, use, cooking, dealing in or storage of meats, fish, fowl, fruits or vegetables." Trash or Scrap consists of rags, paper, discarded tinware, broken glass, sweepings, old iron, feathers and other substances not garbage. Garbage must be kept in galvanized iron garbage cans and well covered; the same to be frequently emptied and cleaned. Trash or Scrap must not be mixed with garbage, but must be kept in an approved receptacle.

"The Science of Public Medicine," says Rosenau, "may be divided into three stages: (1) public hygiene under the teaching of Pettenkofer, this having to do with water supplies, disposal of sewage, wastes, etc. This took care of certain diseases, but failed to influence others which led to (2) preventive medicine. This step grew out of work stimulated by the deficiency of the first, and depends on knowledge thus gained of the modes of transmission of disease. We are now in the midst of the era of (3) personal hygiene, which is marked by such problems as the prevention of syphilis, gonorrhea, etc. The needs of the situation must be met by the schools."

A Money-Saving Proposition is found in medical inspection of schoolchildren. In Manatee, Fla., a town of 1,000 inhabitants having 250 schoolchildren, it is found there is an annual saving of $2,265 by thorough medical inspection. It is certain the efficiency of the schoolchildren of Indiana could easily be increased 25 per cent. through medical inspection, and subsequent removal or relief of physical defects and contagious diseases. If we the people of Indiana continue much longer to neglect to relieve the schoolchildren from their defects and their results, then we will mark ourselves as incompetent. The maltreatment of children through a sin of omission will never be forgiven by Nature.

Assistant Surgeon-General W. C. Rucker of the U. S. Public Health Service has written an address to be delivered over the body of a young man dead of typhoid fever. In the course of the address he says: "It is impossible in the present instance to exactly fix the responsibility for the sickness and death of the departed, but some man or woman is responsible, because only human beings have typhoid fever. The disease cannot be acquired except from some person who has the disease or is harboring the germs which cause it. . . . The day is fast approaching when such sacrifice shall cease to be. It will arrive only when we have learned that the presence of typhoid in a community means that some one has been criminally negligent of his duty. . . . Today with hearts bowed down by the grief of our loss, let us resolve that we will henceforth so order our lives that we will conduct them without menace to others."

Boonville, the county seat of Warrick County, has passed a model public health ordinance. This ordinance provides the following conditions shall be considered as a nuisance and prescribes a penalty against any one who maintains them: 1. Animal manure in any quantity which is not sufficiently protected from flies. 2. Privies, vaults, cesspools, pits or like places which are not securely protected from flies. 3. Garbage in any quantity which is not securely protected from flies. 4. Trash, litter, rags or anything whatsoever in which flies may breed or multiply, which is not protected from flies. Another section of the ordinance makes unlawful any condition which may generate mosquitoes. The ordinance contains other admirable features. The citizens of Boonville are to be congratulated that they have a mayor and city council who so efficiently attend to the public interests.

Florida Again to the Front: The State of Florida many years ago, according to statute, constructed a public health building at Jacksonville. This is a large stone and brick building having in it every convenience and feature which belongs to a public health department. A special tax is laid in that state for public health purposes and it is strange this wise provision is not made in other states. Now comes Florida again to the front and passes an act which provides for the medical examination of all school children of the state, including rural schools, the same to be under the direction of the State Board of Health. The law also provides for the sanitary survey of school buildings and their surroundings annually and gives power to the health authorities to compel the correction of insanitary schoolhouse conditions. There is no politics connected with public health work in Florida, and therein the wisdom of the people is shown. How different from Indiana, where morons attack the public health work and try to hinder efficiency.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

MEMBERS REINSTATED DURING JULY

F. L. Pettijohn.....Indianapolis .....Marion
J. F. McCool.....Indianapolis .....Marion
E. E. Wishard.....Indianapolis .....Marion
D. C. Roney.....Orlando, Fla.....Randolph
B. E. Malone.....Columbus, Mont.....LaPorte

PRELIMINARY PROGRAM FOR THE SESSION TO BE HELD AT INDIANAPOLIS, SEPT. 23 AND 24, 1915

Wednesday, Sept. 22, 1915

3:00 p. m. Meeting of Council.
8.00 p. m. Meeting of House of Delegates.
9:00 p. m. Smoker.

GENERAL SESSION

Thursday, Sept. 23, 1915

8:30 a. m. Organization.

Address of President, Dr. Frank B. Wynn, Indianapolis.

1. Concerning the Modern Conception of Nephritis —Dr. Charles P. Emerson, Indianapolis.

Leaders in discussion: Dr. George F. Butler, Kramer; Dr. J. A. McDonald, Indianapolis.

2. Functional Renal Tests from the Surgical Standpoint—Dr. Thomas Jones, Anderson.

Leaders in discussion: Dr. Frank S. Crockett, Lafayette; Dr. W. P. Garshwiler, Indianapolis.

Friday, Sept. 24, 1915

11:30 a. m. Meeting of House of Delegates.
2:00 p. m. Obstetrics.

1. Toxemias of Pregnancy—Dr. Charles E. Ferguson, Indianapolis.
2. Practical Care of the Expectant Mother—Dr. L. Burckhardt, Indianapolis.
3. The Cesarian Section in Conservative Obstetrics—Dr. G. B. Jackson, Indianapolis.
4. The Effect of Toxemias on the New Born—Dr. H. F. Beckman, Indianapolis.

Leaders in discussion: Dr. H. A. Duemling, Fort Wayne; Dr. Charles N. Combs, Terre Haute.

MEDICAL SECTION

Thursday, Sept. 23, 1915—11 a. m.

1. Hysteria in General Practice—Dr. Paul E. Bowers, Michigan City.

Leaders in discussion: Dr. Walter F. Carver, Albion; Dr. F. F. Hutchins, Indianapolis.

2. Presentation of Case of Hysteria with Relation to Freudian Psychology—Dr. Max A. Bahr, Indianapolis.

Leaders in discussion: Dr. Ernest H. Lindley, Bloomington; Dr. Albert E. Sterne, Indianapolis.

Friday, Sept. 24, 1915—9:00 a. m.

1. Diagnostic Routine in General Practice—Dr. Charles R. Bird, Greensburg.

Leaders in discussion: Dr. John G. Kinneman, Goodland; Dr. Clarence Province, Franklin.

2. Leukemia with Case Presentation—Dr. Joseph M. Barry, Indianapolis; Dr. Jane M. Ketcham, Indianapolis.

Leaders in discussion: Dr. B. W. Rhamy, Fort Wayne; Dr. Charles L. Seitz, Evansville.

3. The Spleen in Relation to Anaemic Diseases—Dr. Allen Hamilton, Fort Wayne.

Leaders in discussion: Dr. H. K. Carey, Bedford; Dr. Virgil R. Moon, Indianapolis.

4. Some Points in the Early Physical Diagnosis of Pulmonary Tuberculosis—Dr. A. C. Kimberlin, Indianapolis.

Leaders in discussion: Dr. Fred A. Tucker, Noblesville; Dr. H. B. Boyd, Cambridge City.

SURGICAL SECTION

Thursday, Sept. 23, 1915—11 a. m.

1. Diseases of the Gallbladder and Their Influence on Adjacent Organs—Dr. W. H. Williams, Lebanon.

Leaders in discussion: Dr. Joseph Weinstein, Terre Haute; Dr. E. D. Clark, Indianapolis.

2. The Surgical Treatment of Uterine Displacements—Dr. W. H. Baker, South Bend.

Leaders in discussion: Dr. G. Eckhart, Marion; Dr. Goethe Link, Indianapolis.

3. Urenephrosis—Its Significance and Detection, with a Review of Cases—Dr. H. O. Mertz, Laporte.

Leaders in discussion: Dr. M. A. Boor, Terre Haute; Dr. H. G. Hamer, Indianapolis.

2:00 to 5:00 p. m. Scientific demonstrations.

8:00 p. m. General Session.

Thirty minute talks by Dr. W. J. Mayo, Rochester, Minn., Dr. E. C. Rosenow, Chicago, and Dr. C. C. Bass, New Orleans.

Friday, Sept. 24, 1915—9:00 a. m.

1. Some Factors in the Surgery in the Upper End of the Femur—Dr. B. P. Weaver, Fort Wayne.

Leaders in discussion: Dr. George R. Andrews, Muncie; Dr. J. H. Oliver, Indianapolis.

2. Surgical Anatomy of the Cleft Palate—Dr. Joseph R. Eastman, Indianapolis.

Leaders in discussion: Dr. B. P. Weaver, Fort Wayne; Dr. David Ross, Indianapolis.

3. Surgical Treatment of Pulmonary Tuberculosis and Chronic Empyema—Dr. W. D. Gatch, Indianapolis.

Leaders in discussion: Dr. Kennon Dunham, Cincinnati; Dr. Albert M. Cole, Indianapolis.

4. Cysts of the Ovary —Dr. James A. Work, Jr., Elkhart.

Leaders in discussion: Dr. A. M. Hayden, Evansville; Dr. T. B. Noble, Indianapolis.

EYE, EAR, NOSE AND THROAT SECTION

Thursday, Sept. 23, 1915—9:00 a. m.

1. The Present Position of Otolaryngology in Medicine and Surgery—Dr. John F. Barnhill, chairman, Indianapolis.

2. Some Recent Operative Procedures for the Relief and Cure of Chronic Glaucoma—Dr. Casey A. Wood, Chicago (guest paper).

3. The Use and Misuse of Tinted Lenses in Refraction—Dr. Fred M. Ruby, Union City.

4. The Tonsil Again—Dr. Marcus Ravdin, Evansville.

5. Chronic Suppurative Mastoiditis, Accompanied by Intracranial Pressure. Case Report—Dr. Edwin J. Lent, South Bend.

6. The Defenses of the Upper Respiratory Tract and Their Preservation—Dr. Walter N. Culmer, Bloomington.

Friday, Sept. 24, 1915—9:00 a. m.

1. Vertigo—Dr. Louis D. Brose, Evansville.

2. Chronic Suppurative Ethmoiditis — Diagnosis and Treatment—Dr. William S. Tomlin, Indianapolis.

3. The Blood Clot Dressing in Simple Mastoid Operation—Dr. Kent K. Wheelock, Fort Wayne.

4. Deviations of the Nasal Septum and the Submucous Operation—Dr. William F. Clevenger, Indianapolis.

5. Increased Blood Pressure—Dr. Walter J. Leach, New Albany.

6. Presentation of Interesting Eye Cases—Drs. Wm. F. Hughes and Frederick C. Heath.

INDIANA STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION

Minutes of June 2, 1915, State House, 9 a. m.

Board called to order by Vice President Dr. Dinnen.

The following members were present: Drs. Canfield, Spaunhurst, Smelser, Spurgeon, Dinnen and Gott.

Minutes of January 12, 13, 14, and Feb. 2, 1915, were read and adopted.

The question of continuing the sophomore examinations was considered. Although only a very few applicants avail themselves of the opportunity given to take the examination in two sections, the board decided to continue such examinations when the proper application is filed at least five days prior to date of examination.

The following report of the reciprocity committee was read and permanent certificates authorized on the expiration of temporary permits to: John V. Stevens, G. E. Mowrer, O. E. Glick, W. O. Bailey, S. D. Clayton, W. H. Crowley, S. S. Frazier, J. S. Rushton, W. H. VanDoren, James Y. McCullough, G. D. Larrison, J. H. Ravenscroft and Lyman K. Gould.

Dr. Dinnen presented the question as to whether a year's service in a hospital should be considered as complying with the rule requiring all applicants for license through reciprocity to have been in actual practice for one year preceding date of application in the state from which they come. It was the sense of the board that one year in hospital service should be accepted as complying with the resolution formerly adopted on this subject.

It was moved by Dr. Spaunhurst and seconded by Dr. Gott that the subject of hygiene and sanitation should be substituted for etiology and hygiene in the examination for license to practice medicine. Motion carried.

It was properly moved and seconded that the following schedule of subjects with number of questions for each subject be substituted for the schedule heretofore in force.

Name of Subject	No. of Questions
Anatomy	10
Pathology and Bacteriology	10
Obstetrics	10
Physiology	10
Materia Medica and Therapeutics	10
Theory and Practice	10
Surgery	10
Physical Diagnosis	10
Gynecology	5
Chemistry	5
Hygiene and Sanitation	4
Ophthalmology and Otology	2
Neurology	2
Pediatrics	1
Medical Jurisprudence	1
Total	100

Seventy-five per cent. must be obtained in Physical Diagnosis, Obstetrics, Physiology and Medicine, not falling below 65 per cent. in any of the remaining subjects. A general average of 750 points out of a possible 1,000.

It was moved and seconded that Rhinology and Laryngology be included in questions submitted in general subject medicine. Carried.

Dr. Spurgeon entered the meeting and presided during the remainder of the session.

The question of admitting licentiates from California through reciprocity without a formal agreement was considered, and it being shown that the California State Board does not deem it possible to establish a formal agreement with Indiana, but that licentiates of Indiana who have been licensed on the basis of a written examination are given the courtesy of registration by endorsement in that state, it was moved and seconded that the Indiana board consider applicants coming from California eligible to licensure on like basis, provided such applicants meet all the requirements for admission to Indiana.

Attorney General Milburn and his deputy, Mr. Keene, came before the board on invitation and were asked several questions as to the board's duties in the matter of revocation of licenses heretofore issued. Several physicians having been convicted of gross immorality in the federal courts and the opinion of the attorney general was sought as to the proper course to pursue in the matter of revocation of licenses issued to such physicians. The board was advised to secure a transcript of the full record of the case in question, to be used as evidence in case charges should be filed, as provided by the statute.

The secretary reported that one Ben Russell had secured a license from the clerks of Cass and Vigo counties by error, fraud or misrepresentation. The following resolution was adopted:

Be it resolved by the State Board of Medical Registration and Examination that the evidence shall be reviewed on which a license was issued to Ben Russell by the clerk of Vigo county to practice medicine and a license issued thereon by the clerk of Cass county, as soon as the board can ascertain his whereabouts and serve the proper notice as provided by law.

The secretary was instructed to notify all the county clerks of this state that Ben Russell has not properly complied with the law governing the practice of medicine and should not be issued a license except on a duly authorized certificate from the State Board of Medical Registration and Examination.

Charges were filed against Dr. Lenore E. Knerr, Indianapolis, Ind., asking that her license to practice medicine be revoked. It was moved by Dr. Canfield, seconded by Dr. Spaunhurst that Dr. Knerr be cited to appear before the board at 10 a. m., July 14, 1915, at 84 State House and show cause why her license should not be revoked and canceled. Motion carried.

A reciprocity agreement with North Dakota was submitted and the secretary authorized to sign same for the Indiana board and return a copy to Dr. Williamson, secretary of the North Dakota board.

Dr. Gott reported that the Bureau of Public Printing had suggested that the board lessen the expense of printing the annual report if possible by eliminating the repetition of names of the physicians of the state by leaving out the county list, and give all the information in the alphabetical index. It was the consensus of opinion that this plan would be impractical and would greatly impair the value of the report. It was decided that the expense of publishing the report might be lesseened in some other way, but that the county list should not be taken out of the annual report.

The case of James Monroe Silvers was taken up and discussed. The evidence having been heretofore heard and on the promise of good behavior in the future the case was continued. The secretary was directed to inquire into the reports that come to the attention of the board that he is frequently intoxicated and to such an extent to render him unfit to practice medicine, and report the result of the investigation at the next meeting.

On motion the board adjourned.

W. T. Gott, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Action of the Indianapolis Medical Society at a Called Meeting Held on the Night of June 17, 1915

Whereas, in the untimely death of Dr. Francis Oswald Dorsey this society has sustained a great loss and the profession of medicine a sad misfortune; therefore be it

Resolved, that we express hereby the high esteem and affectionate regard in which he was held by the members of this society and of the profession which he so conspicuously honored.

In his profession, always led by the highest ideals and filled with the desire to be of service in the broadest and most far-reaching way, he early consecrated his life's efforts to the practice of general medicine.

His devotion to his work and to the welfare of his patients, and his uncompromising honesty, together with a most charming personality, won and held for him an extensive and loyal following. Himself highly educated and thoroughly equipped, he was an efficient medical teacher. In his death we have lost a dear friend; one with whom it was an honor to work and one whose elevating influence will long be missed.

Be it further resolved that these resolutions be spread upon the minutes of this society.

O. G. Pfaff,
A. C. Kimberlin,
Louis Burckhardt,
Committee.

FORT WAYNE MEDICAL SOCIETY

Meeting of May 4, 1915

Society met in regular session at the Commercial Club. Meeting called to order by Dr. Dancer, president pro tem.

No clinical cases.

Regular program: "Suppurative Meningitis," by Dr. M. F. Porter.

ABSTRACT

Meningitis, except those produced by the tubercle bacillus and the diplococcus intracellularis, receive but little attention both in the textbooks and current literature. Many of the more common bacteria cause meningitis, e. g., streptococcus pyogenes and mucosus capsulatus, pneumococcus, influenza bacillus and others less frequently. Primary involvement of the meninges by any of these organisms is extremely rare. However most of them result from other foci of infection. Otitis media, sinusitis (particularly ethmoiditis) and skull injuries afford predisposing factors in majority of cases. Symptoms and signs resemble those of epidemic meningitis, though the picture is more apt to be atypical. Diagnosis should always be made by lumbar puncture and laboratory examinations. Disease is almost universally fatal, but rare recoveries occur — spontaneously and following treatment. When specific sera are not available autoserum (or normal serum) given intraspinously followed by autogenous vaccines if time permits, is suggested. Case of streptococcus meningitis as a result of intraspinous injection of salvarsanized serum reported, with recovery following intravenous and intraspinous injections of large amounts of antistreptococcic serum. Second case of the kind reported from this country. Several other illustrative cases reported, all ending fatally, however.

DISCUSSION

Dr. Edlavitch: I have one point which disagrees with the essayist. The infection in these cases is rather general in nature, live organisms found in blood, and unless in the preparation of autogenous serum this serum is treated in such a manner that these organisms become destroyed, it should not be used. Inactivation will accomplish this.

Dr. Drayer: I should like to say that I have seen a case of streptococcus meningitis prove fatal without any focus of the infection being apparent. I should like to be enlisted with those who do not believe in the injection of sera unless they are antitoxic sera. I have never seen antistreptococcic serum accomplish anything. I see no reason why we should not work out a chemical treatment of meningitis. Mercury by intraspinal injection has been used with some degree of success. I do not believe any man can do an intraspinal puncture on an infant 6 months old without considerable trouble. I have made a number of attempts to get into the canal of infants before successfully accomplishing it.

Dr. Bruggemann: I have never seen any value in antistreptococcic serum. I think that Dr. Porter's case differs from the usual case of streptococcic meningitis in that the infection was introduced into the spinal canal and involved the spinal meninges and not the cerebral meninges in this instance. I have great doubt that anything introduced into the spinal canal in a case of diffuse meningitis will do any good.

Dr. McOscar: The use of antistreptococcic serum will give little or no result unless used in large doses. Small doses accomplish nothing. This serum does not attack pent up pus but does act as an antidote to blood stream infections.

Dr. M. F. Porter (closing): The point made by Dr. Edlavitch is well taken. Inactivation does not protect at all. Dr. Drayer's two cases illustrate the usual outcome of streptococcic meningitis. I think that antistreptococcic serum is not given in large enough doses. I think the approach to the treatment of this condition is through the action of some chemical substance. It is difficult to get into the spinal canal in small infants, and in excessively fat individuals the use of novocain is essential in the making of spinal puncture. I think the danger of infection is nil. You never have meningitis without an involvement of the spinal meninges, the infection being introduced in this manner.

Adjourned.

Meeting of May 11, 1915

Society met in regular session in the assembly room of the court house with eighteen members present. Meeting called to order by Dr. Gross, president pro tem.

No clinical cases.

Regular program: "Ununited Fractures, Their Cause and Treatment," by Dr. R. M. Bolman.

DISCUSSION

Dr. B. Van Sweringen: I have had very little experience with ununited fractures. I suppose I have been very fortunate in this respect, for I know they do occur. I have had very little experience with bone plates and I think I shall have less in the future. I am not an advocate of the open treatment of fractures in all cases by any means. A case in which a compound fracture of the femur occurred in a boy following a fall from a tree, and in which the patient was roughly handled in transportation to the hospital, I plated the fracture and the boy never recovered from the anesthesia. Pulse increased rapidly and he died the day of the operation.

Dr. Porter: I should like to see established in Fort Wayne a Post Mortem Society. We are burying too many of our errors without being any the wiser. The laity are becoming better acquainted with medical facts and postmortem examinations are more frequently allowed. These few remarks are prompted by the report made to this society recently of several deaths of unknown cause following operative interference. Malapposition accounts for many cases of nonunion but it does not account for all cases. A nonunion occurs in cases in which there is no explanation for its occurrence. I believe that osteoplastic work will be done with the aid of absorbable materials. I never remove any fragments of bone from a comminuted fracture. They act as bone splints in many cases. The percentage of nonunited fractures have been greater as the Lane method of plating bone has increased in use. I had a young boy with a fracture on whom I operated twice, union not resulting until he was allowed to walk on the extremity.

Dr. B. Van Sweringen: In this connection I should like to report the following case: A man thrown from the front of an engine fractured both bones of both legs; the ends protruded; the wounds were cleansed with bichloride and iodine; plaster was

applied to the knee; this treatment was given at the town where the accident occurred. Shortly after the application of the plaster, he complained of pain which was controlled by opiates; the cast was too tight; I insisted upon its removal; the tissue was blanched under the bandage; the dressings were then loosely reapplied; Gas bacillus infection had taken place in both legs and the legs were emphysematous to the hip; amputation of both extremities and the patient died within a few hours.

Dr. Catlett: How soon do you introduce an intramedullary splint?

Dr. R. M. Bolman (in closing): In one case the transplant was made at the end of nine weeks. I do not think that a transplantation does so well if placed immediately. Great trouble arises when splints are too tightly applied.

Motion carried that the program committee act as a committee on arrangements for our annual outing.

Adjourned.

Meeting of May 18, 1915

Society met in regular session at the Commercial Club with 29 members present. Meeting called to order by President Rhamy. Minutes read and approved as read. Mr. Doan of the Eastman Kodak Co., demonstrated some plates of colored photographs and explained the process by which these plates were developed. By this process many of the lesions of dermatology can be most beautifully and accurately shown. The work is yet in the experimental state.

Dr. Beall reported for Dr. Duemling a case record and exhibited Roentgen-ray plates and charts of the field of vision of a case of cerebral tumor.

No discussion.

Dr. McOscar reported the following case: Female; 49 years of age; uterine fibroids bleeding at intervals of several months; two years past menopause the fibroid on the posterior uterine wall was pedunculated, freely movable and painless; on opening the abdomen the mass was picked up readily; the tumor which was taken for a pedunculated fibroid proved to be a spleen of normal size out of position; wandering spleen is not a common condition; it was placed back in position and the uterine fibroid was removed.

DISCUSSION

Dr. Hamilton: As far as removal of the spleen is concerned, its removal is not always without danger. A condition of plethora develops which is unpleasant. It would seem that it would be a small matter to anchor this spleen in position.

Dr. Weaver: It would be interesting to know if there were any blood changes in this case.

Dr. Rhamy: I have several times reported cases of amebic dysentery where the monad variety of ameba was the offending organism. This year I have had a series of these cases and they all come from Wells County. A case last year of a man who had made many trips into foreign countries hunting for bugs developed a diarrhea which contained many monads. Under salol his symptoms cleared up. Dr. George Dock thought that these parasites were not the causative factor of his disease. Emetin keeps him most comfortable. A case which occurred in the practice of Dr. Cook of Bluffton presented a stool which was swarming with monads. This stool had been in my office for days and the ameba were still alive and active without any special treatment to keep them so. The next two cases came from Liberty Center in Wells County. Dr. Metts of Bluffton said that they had had an epidemic of dysentery a few years ago at Liberty Center. Today I have found the ameba coli in a stool from a patient at Ossain which is also in Wells County. As near as I can arrive at an opinion as to the origin of these monads, I should say that they come from the water supply (still water). Textbooks of ten years ago regard these organisms as immaterial and it is only recently that they have been considered pathogenic. Emerson makes the statement that ameba found in the stools, no matter what form, must be regarded as pathologic.

Dr. Hamilton asked if any of these cases had a high eosinophilia.

Dr. Rothchild: A well nourished man of 29 has had a diarrhea for several months; choleramorbus at seven years; recently was taken with a right-sided pain following the course of the ureter; blood in the urine; urine increased in amount; saw him for several days; feces showed blood (microscopically) but no crystals and numerous ameba. Emetin administered and symptoms cleared up.

No business.

Adjourned.

Meeting of May 24, 1915

Society met in regular session in assembly room of the Courthouse with twenty-one members present. Meeting called to order by President Rhamy. Minutes of preceding meeting read and approved as read.

No clinical cases.

Dr. Hamilton gave a detailed report and a demonstration of the Benz aldehyde test for urobilin in the urine and gave conditions in which the test is of importance as a diagnostic aid.

DISCUSSION

Dr. Edlavitch: I want to take issue with Dr. Hamilton that this test is not used much in this country. Emerson's Diagnosis gives quite a little space to it. In an article in *The Journal of the American Medical Association* of recent issue, this subject is quite freely discussed.

Dr. Rhamy: I have never taken up this test because I never considered it would be used as a routine test. The ordinary specimens of urine coming into the laboratory have been exposed to light for some time so that the test would be worthless. As I understand it, it only indicates disease of the liver and is not specific of any particular kind.

Dr. Porter: To me it has been a very interesting demonstration. I understood Dr. Hamilton to say of the test, that where the change of the salt occurs by virtue of the action of the intestinal juices, and in blocking of the gall duct this action does not occur: the test would be of great importance in cases of cancer of the rectum or stomach where there had been metastasis in liver as indicated by this test.

Dr. Hamilton: I did not wish to be understood as saying that this test was not known in America, but that it is not as enthusiastically received as it has been in Germany and Austria is true. To me it is important to have a test of the function of the liver in just such cases of metastasis as described by Dr. Porter.

DR. BULSON'S CASE REPORTS

Dr. Bulson reported the following cases:

Case 1.—An employee of the Northern Indiana Traction Company was sent to him from out of town with the report that a piece of steel had penetrated the left eyeball, and could be seen on the iris in the anterior chamber. Patient complained of no pain, and no disturbance of vision. The eyeball presented no evidence of inflammation, but in the lower segment of the cornea could be seen a small denuded spot which stained under fluorescine, and immediately opposite, on the iris, was a small brown spot which might be thought to be a foreign body of irregular shape. In view of the history of trauma, several Roentgen-ray plates were taken but all proved negative and bore out the opinion that the spot was pigment, and that no foreign body had penetrated the eye. Patient was kept under observation for nearly two weeks, and, showing no indications of inflammatory change, he was permitted to return to his work.

Cases 1, 2, 3, 4, 5 and 6, reported by Dr. Bulson were cases of simple glaucoma in which the trephine operation had been performed with varying results. In one case an intra-ocular hemorrhage had disturbed what might have been a very satisfactory result. In two cases vision was improved, and in a third case, progress of the disease was checked, and there has been a slight increase in the fields of vision.

Dr. Bulson also reported having done the trephine operation in a case of acute glaucoma with excellent results.

Several cases of asthma and hay fever were relieved by operations to remove nasal obstructions. In most of the cases, the patients had polypi or deviations of the septum. Removing the pressure and establishing free breathing through the nose gave relief. The cases of hay fever had not shown the same marked relief as had the cases of asthma unaccompanied by hay fever.

Dr. Glock: Referring to the case of foreign body, it is seldom that a Roentgen-ray plate will not show a foreign body if that body is more than a millimeter in diameter. If it is of steel it will show more plainly. More of the foreign bodies of lesser density will show less plainly. It is not at all uncommon for spots to appear on the iris after foreign bodies have been removed. Referring to cases that are often mistreated through an improper diagnosis, corneal ulcer is one of the most common. Diminished vision is the result of corneal opacity. The trephine operation is very satisfactory in its result in the treatment of acute glaucoma. The opening practically never closes up; the drainage is constant.

Dr. Stoler: Foreign body in my own eye left a rusty stain. I wonder if the spot in the iris in this case is not the result of a deposit of pigment left by the foreign body?

Dr. Hamilton: I should like to ask Dr. Bulson how he reduces high blood pressure either suddenly or gradually. I have been unsuccessful in accomplishing this reduction and keeping it reduced by any method.

Dr. McOscar: I would like to ask what the result of leaving an open wound in the iris is? High blood pressure is impossible of reduction in most cases.

Dr. Weaver: I do not believe that it requires the width of one millimeter to detect a foreign body in the eye by the Roentgen ray. It is a locality of very easy access to the ray. I would like to know if the urine findings have been worked out in these cases of bronchial asthma in adults as they have been in children. The presence of acetone bodies in the urine of cases of recurrent bronchial trouble in children is very interesting.

Dr. Bulson: I do not mean to infer that a blood pressure of 250 m.m. can be easily reduced, but if you attempt to do a cataract or a glaucoma operation with a blood pressure of 250 you are liable to come to grief. Elimination will lower the blood pressure decidedly in a fair proportion of cases.

A foreign body in the eye is a source of irritation and will give trouble later on. In this case I do not believe we have a foreign body to deal with. Foreign bodies in the iris sometimes remain for a long time, but eventually produce an irritation and an intractable iritis results. If, in the present case, the patient has any trouble with this eye, I shall proceed to remove it.

No business.

Adjourned.

Meeting of June 1, 1915

Society met in regular session in assembly room of Courthouse with fifteen members present. Meeting called to order by President Rhamy. Minutes read and approved as read. There were several members of the Association of Insurance Agents and other visitors present at this meeting.

No clinical cases.

Paper of the evening—"Insurance Examinations" by Dr. W. D. Calvin.

DISCUSSION

Dr. Morgan: That part of the Doctor's paper which relates to alcoholic drinks; the agent may be more often mistaken on this point than the examiner. Recently I was asked regarding a certain man as a risk for life insurance. I told the agent that I would not pass him because of his alcoholic excesses. However, this man got his insurance from another company. The agent is as much an employee of the company as is the examiner. Regarding the blood pressure and its relation to the prevention of disease, I think it is a good practice to note the blood pressure. The companies are not reducing their rates and yet they are certainly getting a better class of risks. I think that the blood pressure should be taken in every case. A great many people take out fraternal insurance for temporary protection and I think they get just about what they pay for. A man could take a term policy in a good company, but most of these people do not know that. I do not like to go to the applicant's house to make an insurance examination. If a man is a good insurance risk he is able to come to my office.

Dr. English: Dr. Calvin's paper covered the subject in a very exhaustive manner. Some points should be emphasized. In regard to family history, alcoholics, light weights and heavy weights, etc., the trend of opinion in regard to risks having a family history of tuberculosis has changed very much in the last few years. Family history of tuberculosis nowadays does not cut much of a figure, where such a family history formerly rejected the applicant. The weight in these cases has considerable bearing. If the weight is fifteen pounds above normal, the risk

is good, if a great deal above or below, it is a bad risk. The difficulty is in securing proper examiners and a good report of facts in the case. In going over an average of from 50 to 75 reports daily, you would be surprised to know how many of these reports are incorrect and necessitate further correspondence. This is often as frequently the fault of the agent as of the examiner. Blood pressure is now being required by many companies as a routine. Fisher states that fifteen pounds above or below the normal is cause for rejection. The normal being 120 m.m. at 20 years of age and add one m.m. for each year of age. I have paid considerable attention to blood pressure and I believe that we must take into consideration some points such as physique and occupation. A few m.m. above this rule may be expected from an active athletically-inclined applicant, also in one who is accustomed to hard labor. I have known a number of cases in which the urine of another patient was substituted for the urine of the one upon whom the examination was being made. I am glad to see the efforts being made along the lines of conservation of health and especially the destruction of the liquor traffic.

Mr. C. B. Fitch: From the fact that the insurance companies are furnishing insurance at a lower rate than ever before, it seems to me that the latitude of risks should be extended. I wish you would impress upon the minds of people how quickly one can become uninsurable. I object to taking an applicant to be examined who has an alcoholic family history or who has been drinking heavily.

Mr. C. W. Orr: I enjoyed the paper very much. It points out many important facts about life insurance agents and life insurance examiners as a class. No agent of experience will take an applicant for examination who is not in good health. It is a waste of time. There are many facts brought to life by examination which agents are unable to ascertain. Our company (Aetna) requires blood pressure in every case. There is sometimes a disposition on the part of the examiner to see how many cases he can turn down. I do not think that that is right, but the examiners should take an impartial view in every case. I think that we life insurance men should help to make the vital statistics records better and have a department especially for that purpose.

Dr. C. E. Barnett: I want to suggest that in selecting an examiner for life insurance examinations that the company frequently selects a man engaged in a specialty. In this special line he may be the best in the community, but he is frequently rusty on points in general medicine, therefore he is not the best man for the work. The price paid for examiners is too small. Alcoholism is a dangerous condition. The constant drinker is a poorer risk than the periodical drinker.

Dr. Stoler: Many times the applicant is posted on answers to certain questions and is successful in covering up many points which would be important to the examiner.

Dr. Wallace: The companies pay for an examination and it should be thorough. I think every applicant should have a blood pressure reading taken, for it may bring to light many things which might be overlooked otherwise. I think every examination should be made in the physician's office. An applicant is entitled to a good physical examination for his own benefit as well as that of the insurance company.

Dr. B. P. Weaver: It strikes me that we should pay attention to the examination of the heart as well or more than to the blood pressure. An increased blood pressure in the brachial artery does not show arteriosclerosis in any other portion of the arterial system necessarily. Microscopical examination of the urine will be required in a short while in addition to the albumen, sugar and specific gravity tests.

Dr. B. W. Rhamy: I want to emphasize Dr. Weaver's point on urine examinations. I find casts in urine many times where albumen is not present.

Mr. C. W. Orr suggests that this paper be printed. Any agent who tries to "put anything over" on the examiner of the company should be discharged as agent for that company.

Miss Miller's bill for $18.75 was allowed. Applications of Drs. L. K. Gould and G. B. Stemen presented and referred to the Board of Censors.

Adjourned.

Meeting of June 8, 1915

Society met in regular session at Commercial Club with thirty-one members present. Meeting called to order by President Rhamy. President Rhamy in a few well chosen words introduced Dr. A. W. Crane of Kalamazoo, Mich., who presented a paper on "Carcinoma of the Stomach," illustrated by lantern slide photographs of Roentgen-ray plates of many extremely interesting cases.

DISCUSSION

Dr. B. P. Weaver: The point that the Roentgen-ray man must also be a clinician is a good one. A patient today was laparotomized for the second time for symptoms which led to suspicion that the stomach might be the cause of trouble. Out of nine examinations of the stool, no blood was found. The Roentgen ray of the patient's stomach showed a distinct indentation. The splenic notch was taken to be a growth. Nothing was found except a considerably dilated stomach. This case shows how necessary it is to take all phases of the case into consideration. The danger is in the improper interpretation of plates. Team work of the clinician and the roentgenologist is essential.

Dr. Grandy: I should like to ask one question about the emptying time of the stomach in the case of ulcer of the cardia shown.

Dr. Hamilton: Do you not find that the shape of the stomach conforms to the type of the individual? Holtznek found the steer horn stomach in short, thick set individuals. I should like to ask if he does not think there are two types of ptosis, that is, congenital and acquired. As to the length of time that barium stays in the appendix, does it indicate disease of the appendix if it remains two or three days?

Dr. Beall: I should like to ask if there is any particular tendency for the analysis of the gastric content to assume any distinctive type in the cases of reflex trouble in the stomach. For instance, is there any constant type of stomach content which is due to the stomach disturbances of cholelithiasis? In cases where atropin is administered by month, how soon would you expect spasm of the stomach to disappear?

Dr. Bruggemann: Unless a man is a specialist in Roentgen-ray work, it is almost impossible to discuss a paper of this kind. Holtznek has changed his views several times. The credit does not alone belong to the Roentgen-ray man. Most of the light

on the position occupied by the stomach was demonstrated by frozen sections, which were accepted in the German laboratories of anatomy. Hodeck states that fishhook stomach is normal. I would like to ask if in his cases of hour glass stomach it is common to see the contraction wave as great as it is in cases of cancer with involvement of the wall and as to whether the size of this contraction might not be a point in differential diagnosis.

Dr. Crane (in closing): Ulcer of the pylorus causes rapid empyting of the stomach. Cancer cases of cardia also cause very rapid emptying. The stomach may be emptied in 15 minutes and it is hardly possible to take a picture. In regard to the position of the stomach, there is no normal position. The stomach is a bag and is as large as its content. We will see in the examination of a large number of stomachs a striking thing in the peculiarity of the peristaltic wave in the individual case, some will have one wave, some two. Some patients will have a very marked ptosis without any marked symptoms. Some will have very marked symptoms with very little ptosis. If the appendix empties itself of barium in 24 hours that appendix is patent and normal. The best time to examine the appendix is 24 hours following the Bismuth meal. When the appendix cannot be emptied of its supply of barium in 24 hours, that appendix is dangerous to the individual and should be removed. The reflex cases from gallbladder diseases in my own experience, most frequently gives hyperacidity of the gastric content. The appendix gives both. Atropin, if given hypodermically, may act at once. The best way of giving atropin is by mouth until the physiologic action is manifested on the pupil. Then examine your patient. Atropin in properly selected stomach trouble (reflex) is one of the most satisfactory therapeutic measures which we have. Case has gone on record, that since his equipment is proper, he has never seen a case where he has not been checked by operation. The roentgenologist can make a diagnosis of ulcer of stomach better than a surgeon can make it, even though he has that organ in his hand at the time of operation.

Dr. A. E. Crull announced to the Society that the Fort Wayne Tuberculosis Association were ready to take several more cases at thier camp. A rising vote of thanks was given Dr. Crane. Society then adjourned to a smoker.

Meeting of June 15, 1915

Society met in regular session in the assembly room of the Courthouse with twenty-five members present. Meeting called to order by President Rhamy. Minutes of two preceding meetings read and approved as read. Society was addressed by Mayor Hosey on Flood Prevention. He then presented the solicitors for the signatures of property owners who desire legislation on flood prevention. At this point Dr. B. Van Sweringen moved that we have recess for ten minutes so those present who wished to sign this petition might do so.

CLINICAL CASES

Dr. McKeeman: Three weeks ago I saw a man, 52 years of age, who was struck on the abdomen; sudden violent pain; extreme rigidity and tenderness over entire abdomen. In three hours this rigidity became more pronounced and in addition patient was considerably shocked. There was no external sign of injury. I thought I had to deal either with a ruptured bowel or hemorrhage. On opening abdomen, which was done by Dr. McOscar, we found a ruptured bowel and a slit in the mesentery. Abdomen was full of clotted blood; bleeding coming from mesenteric vessels. This opening was united. On further examination it was found that there was a marked rupture in the bowel which was pouring out liquid fecal content into the abdomen. The opening in the bowel was closed by Lembert's suture. It was found that this suture constricted the lumen of the bowel, so a higher lateral end anastomosis was made. Drainage was established; patient was placed in the modified Fowler's position and to date recovery has been uneventful. One symptom which is almost always present in this type of case is rigidity of the entire abdomen and there is little distension owing to this rigidity. Rigidity of this type almost always means a ruptured viscus.

Dr. Bulson: Case 1.—Baby boy, nineteen months of age, of Greek parents. Was brought for attention on June 5 with history of having good eyes until thirteen weeks of age, when the right eye became sore and six weeks later was sightless from pthisis bulbi. No very definite history as to character of affection could be obtained. A few months later the fellow eye became sore, attended by swelling of surrounding tissues. The eyeball gradually protruded from the socket and became enlarged and irregular in shape. Child well nourished and robust appearing. Examination disclosed a hard, irregular tumor fully two inches in diameter, extending outward from the orbit, the shrunken and opaque cornea occupying the upper portion of the mass and indicating the site of the eyeball, which was enclosed in the tumor. Surface smooth but bleeding easily to the touch. The tumor mass was apparently not attached to the lids or to the bony orbit. A tentative diagnosis of sarcoma was made, and the tumor, together with the contents of the orbit, thoroughly removed. The periosteum was found not to be involved, but the tumor mass extended well down the optic nerve to the apex of the orbit. Exenteration was complete, including periosteum, and the orbit thoroughly cauterized. The unaffected lids, after denudation of the mucous membrane, were deflected inward to furnish a skin surface for the orbital cavity. Sections of the tumor showed it to be a small round-cell sarcoma. The opposite eye presents phthisis bulbi. Recovery has been uneventful and the child eats and sleeps well and is good natured. The parents have been recommended to have the Roentgen ray used, but show little intelligent cooperation in efforts to stay the progress of the disease, which undoubtedly will take the life of the child. (Since making the report there are evidences of return of the growth and the child has failed rapidly in general health.)

Case 2.—Patient, boy 3½ years of age. Two days ago was struck in left eye by some foreign body shot from an air gun. It was supposed that the foreign body was a stone, though the children who were playing with the gun were unable to furnish definite information on this point. The eyeball presented a small, ragged punctured wound at the limbus, with prolapse of iris; anterior chamber filled with blood. Roentgen-ray plates showed an irregular foreign

body in the vitreous chamber. As the eyeball showed evidences of active infection and beginning panophthalmitis, enucleation was performed promptly and the foregin body found to be a small stone. Within ten hours the temperature reached 101, and in view of the fact that the children had been playing in the barnyard when the accident occurred, it seemed advisable to administer antitetanic serum, one maximum dose being injected. Outcome of the case questionable, but think that uneventful recovery will ensue. (Patient was able to return home four days after enucleation and has made an uneventful recovery.)

DISCUSSION

Dr. Edlavitch: I would like to offer a suggestion. In one so young as this patient from whom the eye was removed, we should consider the possibility of this being a metastatic growth. In a case which I remember in which both eyes were protruding and a tumor of the brain was suspected, with eye lesions, we found at postmortem a sarcoma of the suprarenal gland, with metastasis to different parts of the body.

Dr. Weaver: In view of the fact that this condition is almost hopeless, some combination of radium and Roentgen ray would be indicated. As Coley claims a certain percentage of cures in this type of case, Coley's serum might be tried.

Dr. Bulson (in closing): The child is well nourished and is totally blind, and since the operation the child seems well, but I thought I noticed today some return of the growth at the apex of the orbit.

Dr. Edlavitch reported for Dr. Drayer: Mr. S., age 51, baker, never sick; four children, all living, no still births; family history, negative; personal history, no illnesses; moderately strong; present illness: last week in March was taken suddenly with a choking sensation in throat and he fainted. There was no speech or gait defect at this time. Choking sensation lasted a few hours. Indisposed for ten days, then a numbness in left arm and hand began which lasted for three weeks; physical examination on April 20 revealed motor paralysis of left arm and hand complete; all the other reflexes normal; his eye grounds negative; urine and blood negative; blood Wassermann negative. Was given potassium iodid and mercury and under this gained partial use of the arm and hand. After one week of this medication a second Wassermann showed positive, double plus (++). Was given inunction with mercury (50 per cent.) 1 dram daily; he rapidly improved. On May 29 in the morning he became stupid, was taken to the operating room and given 0.3 grams of salvarsan intravenously. In the afternoon he had a temperature of 104. Temperature range was from 101 to 105, and he died in coma without convulsions on May 31. Postmortem examination, which consisted of opening only the cranial cavity, revealed a cerebral tumor which proved, microscopically, to be sarcoma. Specimen of tumor exhibited also microscopical sections of growth.

Dr. Beall: From the history of this case I believe that the man had no symptoms of brain tumor until this apoplexy came on, or rather, his symptoms were due to apoplexy from the first. This hemorrhage could explain all the symptoms he had.

Dr. Bruggemann: I think a tumor of this size in the Rolando area without symptoms is indeed unusual. You do not need hemorrhage in a tumor of this size to account for these pressure symptoms Primary sarcoma of the brain is rare, and it never produces metastasis in other portions of the body.

Dr. Eberly: In defense of the Wassermann reaction made with cholesterinized antigen, I want to say that I have never found a positive Wassermann in a case which was not due to syphilis in that individual.

Applications of Drs. L. K. Gould and G. B. Stemen, acted upon favorably by the board of censors, presented. Motion carried that the secretary cast the unanimous ballot of this society for Drs. Gould and Stemen. Ballot so cast. Bill from the Commercial Club, balance on the smoker at Dr. Crane meeting, $5.65. Bill of C. J. Lose, $3.25, presented. Motion carried that these bills be allowed.

Adjourned.

Meeting of June 22, 1915

Society held its annual picnic at Robinson Park. Attendance of eighty-seven.

G. Van Sweringen, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of June 25, 1915

Regular meeting of Muncie Academy of Medicine was held in Muncie Y. M. C. A. building Friday evening, June 25, with President O. E. Spurgeon, M. D., in chair.

Dr. W. C. Stephens read a paper on "Duodenal Ulcer," saying: It is only recently that duodenal ulcers were recognized. Moynihan, who may be considered one of the pioneers, operating first in 1900. Recent statistics show that for every peptic ulcer found in the stomach more than two are found in the duodenum. There is a growing belief that duodenal ulcers are secondary to infections of the gallbladder, appendix or other remote organs. Anything directly or reflexly interfering with the mechanism of secretion, storage and outflow of bile may produce conditions favorable to bacterial infection. A typical case is easily recognized. The difficulty is in diagnosing the complicated cases. There are four cardinal diagnostic features of ulcers: (1) periodicity of the attacks; (2) chronicity; (3) pain; (4) time of and control of pain. (1) A patient who has daily gastric disturbance for one or more weeks with a period of health for weeks or months, followed by a repetition of the former disturbance should be suspected of having an ulcer. (2) Usually there is a history of the above routine having existed for one or many years. The intervals of ease shortening, and the paroxysms of distress becoming more intense. (3) Pain is present in 95 per cent. of all cases and comes on from one to four hours after eating, is usually in the epigastrium, varying in degree from mild distress to severe colic. (4) Pain is usually relieved by taking food, alkalies or changing position of the body. The longer the period between food intake and the onset of symptoms, the lower in the duodenum the ulcer. The more prompt the ease following the ingesting of food, the lower the ulcer.

Dr. C. A. Ball spoke on "Gastric Ulcer," dealing more particularly with the differential diagnosis and treatment. The generally accepted view is that gastric ulcers are due to local interference with the circulation with resulting necrosis, and is most

commonly found along the lesser curvature, and a "contact" ulcer often appears on the opposite wall. Conditions which present some of the symptoms and are sometimes mistaken for gastric ulcer are, (1) the gastric crises of locomotor ataxia; (2) gastralgia; (3) duodenal ulcer; (4) cancer of the stomach; (5) simple hyperchlorhydria; (6) pyloric spasm due to gallbladder affections, appendicitis, etc.; (7) hemorrhage in cirrhosis of the liver. Careful history taking is as essential as clinical examination.

Treatment: Chronic ulcer is rarely cured by medical means, therefore should be dealt with surgically. In case of perforation immediate laparotomy is necessary even if only a closure of the perforation is done. In severe hemorrhage state of patient should influence urgency of operative interference. It is hazardous to open abdomen when a patient is unable to withstand the shock. It is impossible to estimate percentage of cures effected by other than surgical methods. Morphin should be used to quiet a patient following hemorrhage, and an ice bag placed over the stomach. Concentrated food such as sugar, eggs, and butter may be started soon after hemorrhage and given in small quantities every two hours, gradually increasing the intervals, later adding raw chopped meat, rice and zwieback. This diet should be continued four to six weeks. Bismuth subnitrate and alkalies are the only drugs permitted outside of an anodyne.

Adjourned.

Meeting of July 9, 1915

Dr. C. Melvin Mix spoke for a few minutes on "Etiology of Peritonitis," saying in part: The clinical picture presenting in an acute peritonitis depends on the nature of the invading organism and mode of entry. Tuberculosis peritonitis usually has the fallopian tubes in the female or an appendix in the male as an etiologic factor. In fact, the chief cause of general peritonitis is found in the appendix. The next in importance as a cause is the perforating gastric or duodenal ulcer; and third, rupture of the gallbladder. Outside of the hollow viscera the most common cause of peritonitis is tubal disease in women. The early pains are colicky due to contact friction of the peritoneum, but gradually yet certainly become fixed. Vomiting is usually present. Early vomiting in appendicitis is of reflex origin, but the secondary attack after hours or days of relief is due to peritonitis. The board-like rigidity of the abdominal wall, nature's effort to establish immobility and rest is an unmistakable sign. Peritonitis due to B. Coli com. while formidable and far-reaching in its effects, and usually accompanied by an abundance of particularly foul pus, usually gets well. Streptococcus is responsible for a more virulent invasion, a more general lymphangitis from which recovery is less frequent. Peritonitis caused by gas bacilli, in the development of which there is a peculiar crackling noise, is usually fatal. Puerperal peritonitis is, unfortunately, too frequently encountered. Then we have peritonitis due to pneumococci, and the so-called traumatic peritonitis which in most cases is also due to infection.

Dr. W. J. Molloy read a paper on the "Diagnosis of Peritonitis," from which the following was abstracted: Peritonitis is a secondary or terminal condition. Normally the peritoneum is able to resist the invasion of destructive bacteria. The susceptibility to peritonitis increases in proportion as the degree of vital resistance is lessened. The general appearance of the patient has a few characteristic features. The face is pinched, eyes sunken, pulse rapid and tense, and the Hypocratic countenance. Temperature is usually not very high. Breathing is shallow in order to restrict motion of abdominal muscles. The mind is usually alert. The leukocyte count is usually high. When perforation has occurred the distension with gas is apparent. In differential diagnosis we must consider the possibility of intestinal obstruction. Both conditions may be present. Other conditions to be considered are gall stone disease, renal calculi, acute hemorrhagic pancreatitis and typhoid fever. In children pleurisy, pneumonia or pericarditis causes intense abdominal pain which may be mistaken for peritonitis. In typhoid fever the mode of onset, coated tongue and the apathetic face are important considerations.

Adjourned.

H. D. Fair, Secretary.

DELAWARE COUNTY

Regular meeting of Delaware County Medical Society was held on July 2 in Muncie Y. M. C. A. building, and was called to order by past president D. M. Green, M. D.

Dr. H. D. Fair spoke on "Delirium," saying in part: In considering this subject I will deal with the mental confusion of transient character and of short duration due to poisons or acute disease, and not due to pathology or organic changes.

Impressions of mental experiences which make their appearance during the transitional stage only, leave their records sufficiently clear to enable their recall upon recovery. The temperament of the subject is a powerful factor.

Mentality is two-fold in its nature, each division having a distinct origin and function. The subjective mind which is given at the moment of conception by the creator, and the objective or conscious mind that begins its activities nine months later at the date of natural birth. The former never sleeps and, theologians tell us, never dies. Continuity of identity depends on the truth of this assertion. The objective mind is the reasoning element in our lives, is partially under our control, and can be developed indefinitely. Delirium gives objective proof of the prominent part that impression plays in our lives. An individual makes public his dreams if he so desires but in his delirium he may reveal secrets, impulses and emotions hidden for years, or exhibit traits of character combated so long and so vigorously that he supposed them vanquished and banished. The phenomena of hysterical attacks may be traced in part to the emotional reaction following a remembrance.

The forces of good and evil are at continual warfare, and the more decent and upright a person tries to live the greater the struggle. I plead for a well balanced life! Colleges and universities do not encourage violent athletics simply for the exercise; the faculty realizes that there is in every individual pent up emotion or exuberance of spirit that must be dissipated in some way, either legally or illegally. The child confined in a quiet school room makes his exit with a shout. The henpecked man who is not allowed to express his opinion at

home, discourses to or harangues a chance group on the street corner or in a saloon. The more powerfully an emotion has been held in subjection the greater the reaction when the censorship is removed as in delirium. These unexpected outbursts so humiliating to relatives and friends would not be so astonishing if it were remembered that the prude usually has a filthy mind, and the woman who is apparently too refined to discuss, with her daughter, important sex topics, can listen unblushingly to and tell vile and obscene stories to her neighbors. The person who is worrying over real or imaginary troubles will continue to wrestle with the same problems in his semi-consciousness. I believe the frank, placid individual who has few worries, and nothing to conceal need never fear the delirium due either to anesthesia or disease. On the other hand, the emotional who are continually holding some desire or trait in repression, those who are oppressed by an idea, harassed by some care, are leading a dual life or are concealing some crime are very likely to betray themselves and express the truth when the sentinel in the shape of the objective mind is off guard.

Adjourned.

Dwight M. Green, Acting President

HANCOCK COUNTY

The Hancock County Medical Society, on special invitation, met at the Eli Lilly & Company's Bacteriological Laboratories near Greenfield, at 4:00 p. m., July 22.

Nearly two hours were spent in visiting the various departments. Dr. Severance Burrage conducted the party through the plant and explained the various parts of the institution together with the various demonstrations presented. The plant is a model for cleanliness, thoroughness and completeness, and the visit was one of instruction, profit and pleasure to the members of the Society.

At the close of the visit refreshments were served and the members of the society tendered a vote of thanks to the Eli Lilly & Company for their hospitality. Joseph L. Allen, Secretary.

JOHNSON COUNTY

Johnson County Medical Society met at the office of Dr. W. H. White, Edinburg, July 14th, Dr. L. L. Whitesides, president, in the chair, and nine members present.

Minutes of preceding meeting read and approved.

Round table talk on organization followed.

On motion rules were suspended and Drs. William H. White, Jacob V. Baker and W. W. Wright, all of Edinburg, were admitted to membership.

Dr. Chenoweth, of Nineveh, read a paper on Ileocolitis. Discussion opened by Dr. Phipps, after which it was discussed by all members present.

Meeting adjourned to meet at Franklin the second Wednesday in August.

D. R. Saunders, Secretary.

LAKE COUNTY

Lake County Medical Society met in regular session at Hammond Public Library Wednesday, July 14, at 7 p. m., Dr. J. W. Iddings presiding.

The County Tuberculosis Hospital project was discussed and a petition placed in circulation asking the commissioners to make the necessary appropriation.

On motion the Program Committee was advised to make plans for the annual picnic, same to be held at Cedar Lake August 11th.

Dr. P. B. Magnuson, of Chicago, then addressed the society on the "Operative and Non-Operative Treatment of Fractures." The talk was illustrated by a number of most excellent pictures. Following this a general discussion of fractures and allied topics was held.

Adjourned. E. M. Shanklin, Secretary.

SPENCER COUNTY

Spencer County Medical Society met in regular session at Lincoln City at the noon hour, and dinner was served to the society and their wives and visitors.

The scientific program was opened with a talk on "The Country Doctor's Service" by Dr. E. E. Allenbaugh who said in part as follows: There is no difference in the service rendered by the town or city doctor. The great difference lies in the roads traveled. Country doctor usually more rugged than city doctor because of exposure to all weather. In discussion, Dr. H. T. Harter brought out the fact that the country physician must be prepared for all emergencies that may arise.

Dr. H. Q. White read a paper on "The Value of the Medical Society" and showed that the life of the society depended upon its efficiency for service—when it ceases to serve it always falls. Most men believe in the medical society. The county organization builds the American Medical Association. Most of the training of the doctor comes after graduation, reading of medical journals, association with medical men, etc. Let us strive not to gain great honors or riches, but an unlimited amount of common sense.

The paper was discussed by Dr. J. C. Jolly, leading into the social side.

Next meeting to be held at Granview, August 17.

Adjourned. H. Q. White, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Caustic Applicators, Special (Silver Nitrate, 50 Per Cent.).—Wooden sticks, 12 inches long, tipped with a mixture of silver nitrate 50 per cent. and potassium nitrate 50 per cent. Antiseptic Supply Co., New York (*Jour. A. M. A.*, July 3, 1915, p. 29).

Enzymol.—An extract of the fresh animal stomach containing the gastric enzyme in active standardized form and having an acidity due to combined hydro-

chloric acid. Enzymol is stated to be useful as an application to old sores, ulcers and slow healing wounds. It is said to correct offensive odors, to exert a solvent action on pus, sloughing and necrotic tissue and to impart a healing stimulus. For the solution of necrotic bone and in some abscesses hydrochloric acid is added to the diluted extract (*Jour. A. M. A.*, July 24, 1915, p. 333).

PROPAGANDA FOR REFORM

Antox.—"Dr." W. J. Garbutt, Milwaukee, Wis., sells Antox. It is said to cure every contagious disease if taken at the onset. Garbutt issues two sets of advertising, one for physicians and one for the public. The A. M. A. Chemical Laboratory found that essentially each 100 c.c. contained approximately 0.92 gm. ammonium chlorid, 0.12 gm. hydrogen chlorid (equivalent to 1.2 c.c. of diluted hydrochloric acid, U. S. P.), 0.35 gm. hydrogen sulphite equivalent to 6 c.c. of sulphurous acid, U. S. P.), and 18.5 gm. of invert sugar (*Jour. A. M. A.*, July 3, 1915, p. 45).

Gray's Glycerine Tonic.—The Council on Pharmacy and Chemistry reports that Gray's Glycerine Tonic Comp. (Purdue Frederick Company, N. Y.) is not eligible for admission to New and Nonofficial Remedies because its composition is secret; because grossly unwarranted therapeutic claims are made for it; because the name of this pharmaceutical mixture does not indicate its chief constituent, gentian, and because its use is unscientific and a detriment to rational medicine. From the statements made in regard to its composition it appears that besides the alcohol, gentian is the only active drug present. Nevertheless the "tonic" is said to be good for no less than thirty-two diseases, ranging from amenorrhea to whooping cough (*Jour. A. M. A.*, July 10, 1915, p. 189).

Liquid Petrolatum.—Liquid petrolatum is sold under proprietary names such as Bakurol, Interol, Med-O-Lin, Muthol, Semprolin, Whiteruss, Nujol and Stanolax. Nujol is put up by the Standard Oil Co. of New Jersey and Stanolax by the Standard Oil Co. of Indiana. Probably before long each of the other Standard Oil companies will have its own name for liquid petrolatum — that is, if physicians will tolerate it. There is no excuse whatever for special brands of liquid petrolatum, so far as the medical profession and the public are concerned. But it is otherwise with those who supply the product. More can be charged for a product sold under a trade marked name and claims can be made which could not be made when the product is sold under its proper title, liquid petrolatum (*Jour. A. M. A.*, July 10, 1915, p. 175).

Tongaline and Ponca Compound.—The Council on Pharmacy and Chemistry reports that Tongaline, Tongaline Tablets, Tongaline and Lithia Tablets, Tongaline and Quinine Tablets and Ponca Compound Tablets, products of the Mellier Drug Company, St. Louis, are ineligible for New and Nonofficial Remedies because their composition is indefinite and semi-secret; because grossly exaggerated therapeutic claims are made for them; because their names are misleading, and because their composition is unscientific and irrational. Tongaline is essentially a sodium salicylate mixture. Its name is derived from one of the asserted constituents, "tonga," an inert, long discarded mixture of barks and herbs said to be gathered and prepared by Fiji Islanders. In addition, Tongaline is stated to contain blue cohosh, colchicum and pilocarpin. The amounts of the ingredients are not now declared. Neither is the composition of the Tongaline and Quinine and Tongaline and Lithia Tablets made known. Ponca Compound is a "female weakness" remedy in tablet form. The name suggests that "Ponca" is a medicinal substance and at one time "Ext. Ponca" was named as an ingredient. Now the tablets are said to contain extract of mitchella repens, senecin, helonin, caulophyllin and viburnin. Not only are no quantities given, but the character of senecin, helonin, caulophyllin and viburnin is not made known (*Jour. A. M. A.*, July 17, 1915, p. 269.)

Horowitz-Beebe Cancer Treatment.—Newspapers are giving much attention to a new "serum" — Autolysin — for the treatment of inoperable cancer. This had its origin in the publication by S. P. Beebe, formerly professor of experimental therapeutics at Cornell Medical School of a system of treatment by "Alexander Horowitz, Ph.D., an Austrian biologist and chemist" and its trial at the General Memorial Hospital. The composition of the preparation is not disclosed as to quantities, but it is said to be made from: Menyanthes trifoliata, Melilotus officinalis, Mentha crispa, Brassica alba, Anemone hepatica, Viola tricolor, anthemis, fructus colocynthidis, lignum quassiae, Urtica dioica, radix rhei and hedge hyssop. One critic of the matter has remarked that apparently the only ingredient which has been overlooked in the preparation of the new remedy was a rabbit's foot (*Jour. A. M. A.*, July 24, 1915, p. 336).

Echinacea.—This is one of the drugs which the Council on Pharmacy and Chemistry has found valueless. Confirming this, the chemists of a pharmaceutical house report that they were unable to detect the presence of any physiologically active substance in the drug (*Jour. A. M. A.*, July 24, 1915, p. 342).

O'Neil's Malt Whisky:
Mountain Valley Spring Water:
Stafford Mineral Springs Water:
Sa-Yo Mint Jujubes:
Houchens' "Family Physician":
Dr. Martel's Female Pills:
Quickstep, Frye's Remedy:

Gray's Glycerine Tonic.—A "Notice of Judgment" has been issued by the Federal authorities regarding each of the proprietary preparations named. Each was found to be misbranded under the Shurley amendment to the federal Food and Drugs Act which declares it illegal to make false and unwarranted therapeutic claims for medicines (*Jour. A. M. A.*, July 24, 1915, p. 350).

M. I. S. T. No. 2.—M. I. S. T. (Murray's Infallible System Tonic) No. 2 is sold as a cure for cancer, locomotor ataxia, paralysis, diabetes, suppressed and profuse menstruation and a host of other conditions. Analysis in the A. M. A. Chemical Laboratory demonstrated that M. I. S. T. No. 2 consists of capsules which contain aloes and blue mass as their essential constituents (*Jour. A. M. A.*, July 31, 1915, p. 446).

Caldwell's Syrup Pepsin.—Some of the claims made for this "patent medicine" are "Positive Relief for Constipation," "Dispels Colds, Headache, Fevers and all ills caused from Bad Digestion, Foul Stomach, Torpid Liver and Sluggish Bowels." While the name and the claims suggest the presence of pepsin, L. F. Kebler, the government chemist, reported that this nostrum is an aqueous alcoholic solution containing laxatives flavored with oil of peppermint and devoid of any appreciable amounts of pepsin. Regarding the laxative constituents the A. M. A. Chemical Laboratory reports that a senna preparation is the essential laxative constituent (*Jour. A. M. A.*, July 31, 1915, p. 447).

BOOK REVIEWS

Federal Narcotic Record Book, For Physicians, Dentists and Veterinarians. Price, 25c. Published by the Abbott Alkaloidal Company, Chicago.

This is a convenient and well-arranged book for the daily record of narcotics dispensed and distributed. It contains information concerning the Federal Anti-Narcotic Law, space for an inventory of narcotic drugs on hand at the time the law went into effect, and a large number of blank pages for entering a full record of the narcotic dispensed and distributed.

Progressive Medicine—Vol. XVII, No. 2, June, 1915. Edited by Hobart Amory Hare, M.D., and published by Lea and Febiger, Philadelphia.

With the exception of Stengel's review of diseases of the blood this is a surgical volume. Coley reviews the subject of hernia and Gerster the general subject of surgery of the abdomen, exclusive of hernia, quite fully, as usual.

Stengel's observations on diseases of the blood, the diathetic and metabolic diseases, diseases of the thyroid gland, spleen, nutrition, and the lymphatic system ought to be read carefully by every practicing physician.

The closing chapter is a review of Ophthalmology by Edward Jackson.

Prevention and Treatment of Infections. By Oliver T. Osborne, A.M., M.D., Professor of Therapeutics and Formerly Professor of Clinical Medicine in Yale Medical School; Member of the Council on Pharmacy and Chemistry of the A. M. A. etc. Cloth binding, 240 pages. Journal of the American Medical Association, Chicago.

This book contains the series of articles entitled "Prevention Greater Than Cure" which were published in *The Journal of the American Medical Association*. It deals with the influence of the ordinary factors of life on health, the modern methods for the prevention of disease and the treatment of the commoner disorders, especially those affecting the growing child. As stated in the preface, this is a practical handbook for those interested in the care of the child—the physician, the teacher, the hygienist and the school inspector. It is well written and authoritative.

The Principles of Hygiene: A Practical Manual for Students, Physicians and Health Officers, by D. H. Bergey, A.M., M.D., First Assistant, Laboratory of Hygiene, and Assistant Professor of Bacteriology, University of Pennsylvania, Octavo of 531 pages, illustrated, fifth edition, thoroughly revised, W. B. Saunders Company, 1914.

The author states in his preface that this book has been prepared to meet the needs of students and to aid physicians and health officers in learning of "the advances made in hygienic practices in recent years." For such a purpose the book is worth while. What ought to appeal to students and physicians in general is the brief—yet thorough—manner in which all the subjects are treated. For example, the subject of "Heating" could hardly have been handled better, and the pages dealing with immunity and susceptibility to disease are really splendid.

In view of the increasing use of hypochlorite of lime and the corresponding increasing interest in that method of sterilization of water more space could possibly have been devoted to this subject with profit.

It is gratifying to note that the author calls attention to the alleged differences between light and dark meats and to the tendency to minimize at present the prohibition of dark meats in chronic nephritis.

The illustrations are few but very good, and the "appendix" deserves special mention.

Eye, Ear, Nose and Throat Volume of the Practical Medicine Series for 1915, Edited by Drs. Casey A. Wood, Albert H. Andrews and William L. Ballenger. Cloth, price $1.50; price of series of ten volumes, $10.00. The Year Book Publishers, Chicago.

This is one of the series published primarily for the general practitioner, though the arrangement in the different volumes enables the physicians interested in special subjects to buy only the parts they desire.

This volume, devoted to the eye, ear, nose and throat, contains a resumé of all the distinct advances in the special fields enumerated. As usual, this volume is up to the standard established by the editors, all of whom are well-known authors, clinicians and teachers. In view of the enormous amount of literature that is put out during any given year and the impossibility on the part of the average physician of reading everything of value that is published, this record of the recognized advances in the special fields under consideration is almost indispensable to the busy specialist and will prove of great interest to the general physician.

A Laboratory Manual and Text-Book of Embryology. By Charles W. Prentiss, A.M., Ph.D., Professor of Microscopic Anatomy in the Northwestern University Medical School, Chicago. Octavo of 400 pages with 368 illustrations, many of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $3.75.

This book represents a highly successful attempt to combine brief descriptions of the vertebrate embryos which are studied in the laboratory with an account of human embryology adapted especially to the medical student. The quality of conciseness about this work is refreshing, and while only the gist of human organogenesis is contained in the book the items of essential and definite knowledge are clearly set forth.

The value of pig embryos for laboratory study is emphasized by the author and he devotes a part of this book to the results of several years of experimental work with these embryos.

The reviewer can unhesitatingly recommend Dr. Prentiss' text-book to anyone interested in the subject of embryology.

Principles of Bacteriology. A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene and Bacteriology and Director of the Laboratory of Hygiene, University of Pennsylvania. 12 mo, 650 pages, with 113 illustrations, 28 in colors. Cloth, $2.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

Modern bacteriology has progressed so rapidly that he who would keep in touch with all of the advances must avail himself of the latest and best writings on the subject. Abbott's "Bacteriology" with its numerous editions has an enviable record as giving at the time of publication the latest and most improved knowledge on the subject under consideration. This 9th edition maintains the standard set, and is indispensable to the up-to-date physician. As stated by the publisher, it is noteworthy for brevity, clarity, and scientific accuracy of statement. The new edition has been revised with such thoroughness that it is essentially a new work. It includes all of the recent advances of proven value, and the obsolete and non-essential material has been eliminated. The details

of laboratory equipment and the use and value of apparatus receive careful attention. The minutiae of laboratory technic are presented in complete but not burdensome detail. The work is eminently practical and will prove as popular with the profession as former editions of this well-known work.

Students' Manual of Gynecology. By John Osborn Polak, M.Sc., M.D., F.A.C.S., Professor of Obstetrics and Gynecology, Long Island College Hospital, etc. 12mo., 414 pages, illustrated with 100 engravings and 9 colored plates. Cloth, $3.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

Dr. Polak's idea in writing this book was to give the student and practitioner a concise conception of the pathology and symptomatology of those diseases peculiar to women together with a brief summary of the accepted principles of treatment. The author has succeeded in carrying out his idea in a commendable manner.

The arrangement of the book is orderly. The opening chapters deal with the physiology of the genital organs and with a discussion of hygienic considerations. The pathology, the symptoms, diagnosis and treatment of the various diseases are there presented fully and in sequence. The book is largely devoted to the consideration of the various gynecological operations and the author has had the good sense to avoid excursions into domains of obstetrics and abdominal surgery. It is with regret we note that Dr. Polak did not see fit to limit his descriptions to those operations and methods practiced by himself, as it is obvious that all the operations of gynecology cannot be squeezed into a book of 398 small pages. The reviewer would suggest that in future editions of the book at least a few of the six descriptions of operations for retrodeviations be eliminated.

The Commoner Diseases; Their Causes and Effects. By Dr. Leonard Jores, o. ö. Professor der Allgemeinen Pathologie und Pathologischen Anatomie an der Universitat Marburg. Authorized English Translation by William H. Waglem, M.D., Assistant Professor in Columbia University, Assigned to Cancer Research; Assistant Pathologist to St. Luke's Hospital, New York City. Price, $4.00. J. B. Lippincott & Co., Philadelphia, Pa.

The book is a compilation of the lectures delivered by Dr. Jores to his class in pathology at Marburg. The author states in his preface that these lectures were published primarily for his pupils, but they are also well worth the attention of the practitioner. The illustrations, of which there are two hundred fifty, are exceptionally fine; most of these are photographs and serve to illustrate the subject matter to a nicety. The descriptions of the disease processes considered are clear and concise, as are also those of the etiology of disease.

The absence of long descriptions of morphological changes and minute anatomy of diseased processes, so common to the usual text book of pathology, and the consideration of pathological changes of a diseased organ from the standpoint of disturbed function, makes the book a very interesting and instructive one. These lectures do not cover the entire field of pathology, but, as the author states, the more common and important disorders are reviewed and it is his intention to add to this material later. The work is one of the most novel and readable texts on pathology which the reviewer has had the pleasure of reading.

Obstetrical Nursing. A Manual for Nurses and Students and Practitioners of Medicine. By Charles Sumner Bacon, Ph.B., M.D., Professor of Obstetrics, University of Illinois and the Chicago Polyclinic; Medical Director, Chicago Lying-In Hospital and Dispensary; Attending Obstetrician, University of Chicago Polyclinic, Henrotin, German and Evangelical Deaconess Hospitals. 12mo, 355 pages, illustrated with 123 engravings. Cloth, $2.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

This work is the most thorough text on obstetrical nursing which the writer has had the pleasure of examining. The chapter on labor is especially good, as is also the one devoted to obstetrical operations.

The first chapter deals with ethics and contains much which might with profit be memorized by both the prospective and graduate nurse. A criticism which might be offered is concerning the detailed instruction given the nurse for vaginal examination, which stimulates nurses to make examinations.

Warning of the possible danger attendant upon such examination is given, it is true, but it seems to the writer that the information to be obtained by a vaginal examination as made by a nurse, who at best is only partially trained in the subject of obstetrics, hardly equals the possible danger such an examination might entail.

Chapter VI is devoted to the care of the infant, and the subject is covered in a very satisfactory and thorough manner.

The whole work in a general way might be read with advantage by both medical student and practitioner, and is a valuable addition to the obstetrical literature.

Baking Powder—A Healthful, Convenient Leavening Agent. By Thomas G. Atkinson, M.D., L.R.C.P. (London). Fifty-eight pages. Price, 50 cents. Commonwealth Press, Chicago.

The doctor frequently has occasion to prescribe a diet for his patient and under such circumstances, is interested in the healthfulness and action of every ingredient of the food. Probably no ingredient is more influential in the production of appetizing and nutritious foods than is baking powder, and at the same time there is no ingredient over which there has waged such fierce trade controversies as to healthfulness and efficiency.

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ent powders of the same strength in the light of their medicinal doses.

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Diagnostic and Therapeutic Technic: A Manual of Practical Procedures Employed in Diagnosis and Treatment, by Albert S. Morrow, A.B., M.D., Clinical Professor of Surgery in the New York Polyclinic; Attending Surgeon to the Workhouse Hospital, and to the Central and Neurological Hospital, Octavo of 834 pages with 860 illustrations, mostly original, second edition, thoroughly revised. W. S. Saunders Company, 1915.

In the four years since the first edition of this work appeared the advances and changes in methods of diagnosis and treatment have been so marked that a new edition, thoroughly revised, was needed to bring the work up to date. These changes and additions have brought about a somewhat larger volume in which the subjects are taken up in the same general order as in the former edition.

Among the more noticeable additions are new chapters on the treatment of neuralgia by injections; technic of administering salvarsan and neosalvarsan, and of injecting human serum; a discussion on the diagnosis and treatment of fistulous tracts by means of bismuth paste; the method of vaccination; a description of duodenal feeding, and of the destruction of vesical growths by the high frequency current. The other additions found in each chapter throughout the book are, indeed, too many to give in detail.

The subjects of general and local anesthesia are treated so fully and so well as to make the two chapters on these subjects among the best in this volume.

The elaboration of the subject of transfusion has added much to the practical value of the book.

It may be suggested that the heading "Lumbar Puncture as a Means of Administering Antitoxic Sera" might be changed so as to read "Therapeutic" instead of "Antitoxic Sera."

There is a real need at present for just such a work, so that a "very kind reception" of this second edition by the profession may be safely predicted.

Alveolodental Pyorrhea. By Charles C. Bass, M.D., Professor of Experimental Medicine at the Tulane Medical College and Foster M. Johns, M.D., Instructor in the Laboratories of Clinical Medicine at the Tulane Medical College, Octavo Volume of 167 pages with 42 illustrations, W. B. Saunders Company, 1915.

This book emphasizes the contention that *Endamoeba buccalis* is the specific cause of pyorrhea alveolaris, or Rigg's disease, and treats the whole subject upon that basis.

The reasons for assuming that this parasite is the specific cause are stated clearly and seem to be quite convincing. The pathology of the disease is given very fully. The symptomatology is described in detail. The important points in the diagnosis are stated briefly, but forcibly. The specific effect of emetin and of ipecac in the therapy of the disease is emphasized, and the prophylaxis is discussed in such a way that many new ideas with reference to alveolodental pyorrhea are brought out.

The excellent illustrations add a great deal to the completeness of the volume.

Such a splendid book on this subject ought to be of immense practical value to every class of physicians and to dentists. It stands out as one of the best monographs on this subject known to us at present.

The Intervertebral Foramina in Man: The Morphology of the Intervertebral Foramina in Man Including a Description of Their Contents and Adjacents Parts with Special Reference to the Nervous Structures (Supplement to "The Intervertebral Foramin"). By Harold Swanberg, Member American Association for the Advancement of Science, with an Introductory Note by Prof. Harris E. Santee. From the Anatomical Laboratory, Chicago College of Medicine and Surgery, illustrated by 11 original full-page plates. Chicago Scientific Publishing Company, 221 S. Ashland Boulevard, Chicago, Ill., 1915.

This is an admirable scientific study of the intervertebral foramina in man, and is beautifully illustrated. To those interested in this phase of human anatomy this monograph will be of unusual interest and very helpful.

Applied Immunology: The Practical Application of Sera Bacterins Prophylactically, Diagnostically and Therapeutically, with an Appendix on Serum Treatment of Hemorrhage, Organotherapy and Chemotherapy. By B. A. Thomas, A.M., M.D., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine; Instructor in Surgery in the University of Pennsylvania; Associate in the William Pepper Laboratory of Clinical Medicine, and R. H. Ivy, M.D., D.D.S., Assistant Instructor in Surgery in the University of Pennsylvania; Instructor in Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine, Philadelphia. Volume of 359 pages with 5 colored inserts and 68 illustrations in the text. J. B. Lippincott Company, 1915; price, $4.00.

These two authors have recently written so much upon various phases of the general subject of serology and immunology that a volume on such a subject by them was not unexpected.

In this work on "Applied Immunology" they have given the profession a book that is needed very much just now. It is the right work at the right time. They discuss immunology in a practical way almost entirely. They show why and how our knowledge of immunity is applied in practice. In spite of the fact that the work is comparatively brief it is quite complete in practically every respect. Had the authors mentioned the use of mercurialized serum in the intradural treatment of syphilis of the nervous system, and had they discussed just a little more fully the use of pollen vaccine in the prophylaxis and treatment of hay-fever there would have been nothing at all to suggest.

The book is written in admirable style. The authors know their subject, and they know how to express concisely and forcibly what they want to say. Thus in their discussion on the interpretation of the Wassermann test they say wisely that a positive test "does not necessarily mean that the lesion in question is syphilitic, but that there is syphilitic infection in the body of the patient."

Such a work ought to be not only read but studied by every physician, for in this work he can get briefly all that there is to be known at present about bacterial therapy, the therapeutic sera, the various antibodies and antigens, the opsonic index, the Wassermann test, the serum treatment of hemorrhage, and organotherapy. The technic for administering salvarsan and neosalvarsan is also included and will appeal to the reader as one of the best features in the volume.

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ORIGINAL ARTICLES

IS THE DIAGNOSIS OF SARCOMA SUFFICIENT?

MILES F. PORTER, M.D.
FORT WAYNE

In thinking over this subject and studying the literature upon it, I was very forcibly reminded of the English poet's (Butler) poem Hudibras, in which Sir Hudibras is made to say:

> "There's but the twinkling of a star,
> Between a man of peace and war;
> A thief and justice, fool and knave,
> A huffing off'cer and a slave;
> A crafty lawyer and pickpocket,
> A great philosopher and a blockhead;
> A formal preacher and a player,
> A learned physician and manslayer."

Practically all agree that sarcomata are of connective tissue origin, but this agreement practically ceases here. Adami, for instance, says, "Certain atypical epiblastic tumors must also be regarded as sarcomata." This is true also of the actively growing tumors of transitional lepidic character. According to most definitions granulomata, granulation tissue, gummata, fibromata, myxomata, fibromyomata and many other neoplastic tissues belong to the sarcoma group. Many authors still retain the myelomata among the sarcomas. However, Bland Sutton says that close study indicated that these tumors differ histologically, pathologically and clinically from sarcoma. By many German writers Hodgkin's disease and lymphosarcoma are classed together as malignant lymphomas. It is pretty generally conceded that the malignancy of sarcoma is in proportion to the immaturity of the cells of which it is composed and for this reason, generally speaking, those sarcomas which are of the spindle-cell variety or, in other words, are made up of cells closely resembling, if not identical, with ordinary mature connective tissue, are the least malignant.

There can be little question but that the recurrent fibromas of the uterus of the older writers were really sarcomas, differing not at all histologically from the innocent fibromata or myofibromata of the uterus. The difference between the benign fibroma on the one hand and the recurrent or malignant fibroma on the other consists in the fact that in the former the cells, like some individuals, are incorrigible, affected, as it were, with the wanderlust, and refuse to stay at home where they belong, whereas in the latter the cells behave as ordinary good children are supposed to behave.

Fibrosarcomata of the ovary are less malignant than the other forms of sarcomata of this organ, and yet fibrosarcomata of the bone may be far more malignant than round-cell sarcoma of the same tissue. Sutton has pointed out that in some dermoids of the ovary one may often find tissue that cannot be distinguished from sarcomatous tissue, and moreover that the removal of such dermoids is sometimes followed by pelvic sarcomata. Pulcher also reports a case of giant-cell sarcoma developing in the wall of an ovarian cyst. There have been ten or more cases of carcinosarcomata of the ovary reported. Bashford and Haaland have, by repeated transplantation of adenocarcinoma, succeeded in producing pure sarcoma. Speaking from the histologic standpoint, what are we to do in the way of classification of the endotheliomata? According to Adami these neoplasms may, if of slow growth, present all the characteristics of cancer and if actively vegetative be indistinguishable from sarcoma. Moreover, an intermediate type is frequently met, in which one part of the growth shows the cancerous

growth of structure and the other part has taken on a hyaline type. Sutton proposes that malignant tumors of the ovary in children should be classified by themselves. Upon what does the malignancy of a sarcoma depend? Certainly not alone upon the character of the cells of which it is made, for, as noted above, a spindle-cell sarcoma of the ovary is relatively non-malignant, whereas the spindle-cell sarcoma of the bone is oftentimes more malignant than the round-cell variety of bone sarcoma. Adami says: "We must always keep in mind that malignancy depends upon more than the mere form of cell present; of two tumors composed of equally small round cells, one may exhibit rapid generalization, while the other may be at most locally malignant. The tissue of origin, if it can be determined, should largely influence our diagnosis. At most, we can lay down that the more embryonic the type of cell the greater the presumptive evidence of malignancy, and that as between two tumors of the same origin the more vegetative the type of cell and the greater the departure from the adult cell standard, the greater is the malignancy." He further says that "tumors which superficially appear to be composed of cells of like size and arrangement, if derived from different tissue, may vary widely in malignancy." The relative malignancy of sarcoma of the tibia and sarcoma of the femur offers a good illustration of this point. Sutton says that he has had the opportunity of following nine cases of sarcoma of the femur throughout their whole clinical course. All the patients died within the year of operation from dissemination of the tumor or from local recurrence. He has known several patients with sarcoma of the tibia who survived amputation of the leg and were alive and well five years thereafter.

It is also a well-known fact that periosteal sarcomas, generally speaking, are more malignant than central. Other things being equal, the malignancy of a sarcoma decreases with the increasing age of the patient. Speaking of the character of the cells and the relation which their character or form bears to the degree of malignancy, we may refer to melanotic sarcoma originating from moles. The cells here are usually of spindle shape, and reasoning from this basis alone, one would conclude that the neoplasm was but slightly malignant, whereas the fact is that they are not surpassed in malignancy by any other form of growth.

Borst thinks that the malignancy in these tumors is due to an irritation caused by the pigment granules. Indeed there is considerable discussion as to whether these malignant pigmented moles should be classified as carcinoma or sarcoma (Hertzler). "Lubarsch and Abesser consider these tumors epithelial, and propose the term 'Nevo-carcinoma.' The disposition of these tumors to metastasize first by the lymphatics presents some resemblance to the epithelial tumors, but their disposition later to form generalized metastases brings them in closer relation to the sarcomas." However, I agree with Hertzler in the opinion that they are generally considered as sarcomas. The important distinction in these tumors would seem to me to be not as to whether they were carcinoma or sarcoma, but that they are malignant and pigmented.

The dissemination of sarcoma is an important question also which requires further elucidation. Generally speaking, it is said, and truly so, that sarcomas have no lymphatics and are disseminated through the blood stream, and yet the reverse is true of sarcomas of the thyroid gland. Here dissemination by way of the lymphatics is the rule and dissemination by way of the blood stream the exception. And as noted above, melanotic sarcomas, especially those originating in the skin, metastasize via the lymphatics at first and later via the blood vessels. Perhaps the greatest advance that has been made lately in the study of sarcoma has been in the study of sarcoma of the bone. Most of us who left our alma maters ten years or more ago were taught that a diagnosis of sarcoma of a long bone called for an amputation through or above the joint proximal to the growth and that even with this treatment the prognosis was extremely unfavorable. Even in so late a text book as that of Keen (1907) in the chapter on diseases of the bone, written by E. H. Nichols, concerning the treatment of sarcomata of bone we read: "The treatment of all sarcomata is early and complete removal. This means in nearly all cases amputation of the affected bone and it is important that the amputation should be of the entire bone through the joint between the bone and the body, rather than amputation of the bone in continuity."

"The prognosis after removal is very variable, being poorest in the round-cell type of sarcoma, and most favorable in the slowly growing fibrosarcomata."

Bloodgood has shown — and by the way we are indebted to no individual more than we are to Bloodgood for the development of our knowledge concerning malignant tumors of bone in

general and sarcomata of bone in particular — that giant-cell sarcoma, whether originating in the periosteum or the medullary cavity, may be permanently cured by simple curetting. In his investigation of over 100 cases of the pure tumor none have given metastasis. Local recurrence sometimes followed curetting, but these were permanently eradicated by a second curetting, resection or amputation. He is of the opinion that giant-cell sarcoma of the bone is one of the least malignant sarcomata of bone. He has records of sixteen cases of giant-cell medullary sarcoma, all of which were well twelve years after the operation of the oldest case, the operations varying from curetting to amputation. In Bloodgood's experience the prognosis in giant-cell sarcoma of the flat and irregular bones, such as the jaw, is equally as good as in giant-cell sarcomas of the long bones. He has had twenty cases of giant-cell sarcomas of the jaw which have remained well since their removal. He says that he has failed to find a single case of giant-cell sarcoma which has given metastasis and that there are recorded cures for two or more cases after recurrence. Speaking further, he says: "It is a rather remarkable and suggestive observation which has been commented upon by many writers that among the more malignant forms of sarcoma of the bone there are about as many resections as amputations. In sarcoma of the bone death is due to metastasis and not to local recurrence. Periosteal sarcoma, characterized by spicules of new bone formation radiating from the shaft, between which tumor tissue is present, seldom or never gives rise to metastasis. Local resection should be the operation in these cases. The tumor has a distinct capsule and does not infiltrate the surrounding muscles. It must, however, be removed with the shaft of the bone which it surrounds."

We may conclude then that the prognosis in a given case of sarcoma should be based (1) upon the age of the individual patient; (2) upon the tissue from which it originates; (3) upon the character and arrangement of the cells of which it is composed; (4) upon its location, if bone or soft tissue, and if bone which, as tibia or femur, and, for instance, whether it occurs in the medullary cavity of a bone or on the surface, or within the substance of an organ like the testicle or ovary or on the surface of these organs; (5) the presence or absence of pigment; (6) upon the rapidity of growth of the tumor.

The following cases are reported in brief:

Case 1.—W. F., man, aged 22, married, American, salesman. Patient was referred to me July 16, 1911, by Dr. Bulson, who had a short time previously removed the left eye together with the surrounding tissue for what was pronounced by Dr. Rhamy to be a spindle-cell sarcoma. He was referred to me with the view of a possible second operation for recurrence of the growth. A horseshoe flap was made in the skin of the temporal origin with the open end toward the ear, thus uncovering the temporal fossa. A flap down to the deep temporal fascia was reflected, the zygoma was removed, the temporal muscle split and reflected and the underlying tumor mass removed down to the bone, which was thoroughly curetted. The orbital cavity was also uncovered, all apparently diseased tissue removed down to the bone, the bone curetted. The orbital plate of the ethmoid, together with the cells, was removed. The sphenomaxillary medullary fossa was opened. After a thorough use of the curet, the actual cautery was applied thoroughly, followed by Harrington's solution. The soft parts were then approximated and the wound was closed by catgut sutures. Subsequently the man received a course of Coley's toxins. The man made a good recovery. I last heard from him definitely two years after the operation, when he was well and firing an engine on the railroad. The man is living at the present writing (four years), but I cannot say whether or not there are any signs of return of the growth.

This case emphasizes the statement of Bloodgood to the effect that secondary operations in sarcoma of bone are frequently curative when the growth is of the giant-cell variety and suggests very strongly at least that the same remark might apply to some spindle-cell sarcomata of the periosteum.

Case 2.—Girl, aged 15, consulted me for tumor of the abdomen, which she had recognized one year before. The patient was very emaciated and the abdomen was larger than pregnancy at term. She had never menstruated. I could not make out the cervix or os by a vaginal examination. There was some ascites. The diagnosis was a sarcomatous abdominal tumor, probably ovarian. At operation many adhesions were encountered. The bulk of the tumor was reduced by opening the larger cysts. It was not until after the mass was removed that it was found that it included the adnexa and the uterus, and that the sarcoma involved both ovaries. The solid portion of the tumor weighed nine pounds.

The patient made a satisfactory recovery and was in perfect health with no sign of return of

the trouble eleven months after the operation, at which time she reported at my office. She promised to report to me upon the first intimation she had of any return of the trouble and as she has not done so, I have every reason to believe that she is still in good health. The microscopic diagnosis in this case was large, round-cell sarcoma.

Case 3.—Girl, aged 18, single. Her general health was good. She had noticed an abdominal growth for a few weeks before consulting me. There was no pain or other symptoms. A diagnosis of tumor of the left ovary was made. At operation the tumor was found to be solid, the size of an adult's head, and free from adhesions. On microscopic examination the tumor was found to be a fibrosarcoma. It is now twenty years since the operation, and the patient is well. Since the operation, the patient has married, and is now the mother of several children.

The first report on this tumor was fibroma and it was only when further sections were made that it was found to be fibrosarcoma.

Concerning this case I may say that the tumor seemed to be very thoroughly surrounded by a firm, thick layer of mature fibrous tissue. This probably explains the fact that she is alive and well today. Concerning the second case, according to all the rules of the game, this patient should have been dead before this, inasmuch as there was ascites present, together with numerous adhesions, and the tumor had existed for a year. It is well to emphasize the fact here that ascites in the presence of malignant tumor in the abdomen does not necessarily mean peritoneal involvement. On the other hand, it is well to say here that ascites in connection with abdominal tumor does indicate that the tumor is malignant. Again, the recovery of this girl proves that there are exceptions to the rule laid down by Sutton and others to the effect that sarcomas of the ovary in children are well nigh universally fatal.

We may conclude by answering the question chosen for the title of this paper as follows: A diagnosis of sarcoma without further qualification is incomplete, inadequate, unsatisfactory and dangerous, in that it may and frequently does lead to prognoses that are grave beyond warrant of the fact; in that it may and does lead to dangerous and mutilating operations when safe non-crippling operations suffice to cure; in that it may and does lead to withholding operations that may prove curative.

A diagnosis of sarcoma to be adequate should include: (1) the character of the cells composing the growth and the relative proportions of the different kinds of cells in those tumors (and they are many) of the impure or mixed type; (2) the tissue from which the tumor originates, as periosteal, medullary or endothelial; (3) the location of the tissue where widely distributed, *e. g.*, what bone; (4) age of the patient; (5) apparent etiologic factor if known or suspected, especially as to trauma, or preexisting neoplasm or scar; (6) duration of growth, *i. e.*, rapidity; (7) presence or absence of pigmentation.

EPISIOTOMY, A PERINEAL SAFETY MEASURE *

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"When a tear of the perineum appears inevitable, the question arises, shall it be allowed to occur spontaneously and go in whatever direction it may, or shall we seek to anticipate it, or at least divert it away from the sphincter into unimportant structures? Ould in 1742 cut the vulvar outlet when it offered too great resistance to the escape of the head. G. P. Michaelis in 1810 incised the perineum to avoid a dangerous tear. Ritgen and Schultze made numerous small incisions in the tense vulvar ring. Scanzoni recommended two lateral incisions, Crede, one, directed from the frenulum toward the tuberosity. Many accoucheurs perform the operation, preferring a clean cut to the jagged tear, and claiming that the lateral structures are less important than the central portion of the perineum, and fearing that a tear beginning in the middle line only too easily goes beyond control of the attendant into the sphincter ani, even into the rectum."[1]

The indications for episiotomy are vulva infantalis, with fully developed internal genitals; extremely large ligamentum triangularis; former perineorrhaphy; narrowing of the introitus due to pathologic conditions, such as edema, hematoma of the vulva, abscess of Bartholin's gland, neoplasms, extremely large condylomata accuminata, extremely high degree of vaginismus; rigidity of perineum; brittle-like perineum (in old primipara); extremely large fetal head, or pathologic presentations—forehead, parietal, face; forceps delivery; "strong indication for episiotomy is the condition in which the head, in the presence of good pains, does not come down into the vulva, but the occiput seems to be going forward—the pos-

* Read before the Fort Wayne Medical Society, April 27, 1915.

1. DeLee: Principles and Practice of Obstetrics, 1913.

terior part of the perineum bulging, while the anterior part remains flat." [2]

One obstetrician uses one, while another uses a different one of the following incisions: bilateral, central or median, and mediolateral. The last named is usually (incorrectly) spoken of as the lateral.

Episiotomy cuts the skin, the mucosa, the constrictor vaginae, the transversus perinei, and sometimes a few fibers of the levator ani. The mediolateral incision was first recommended by Tarnier, and to-day one of its warmest advocates is DeLee. He teaches that after the head has stretched the levator muscles, which takes place when we notice the anus opening up and coming forward, should we notice that the perineum is resistant and about to tear, that then is the time to do an episiotomy. The blunt-ended blade of a pair of scissors is placed on the mucosa of the vagina and the other blade outside on the skin between the anus and tuber ischii, the cutting angle at the median raphé. The sphincter is pushed back and the scissors are forcibly and quickly closed, cutting through the tissues. The vulva and perineum retract, leaving a gaping wound, which usually bleeds very little. The operation is not attended by great pain, there being more or less pressure analgesia. In fact the patient seldom notices it. Of course under anesthesia, no matter how light, there is no pain. After delivery of the placenta the wound is closed, under surgical anesthesia, with two rows of suture. The muscle is sewed with chromic catgut and the skin with plain catgut or silkworm-gut. It is essential and important to place the sutures from above downward, and not transversely, in order to have good coaptation of muscle fibers. I believe we get better results, not only in episiotomy wounds, but also in repaired lacerations where no stitches are placed through the vaginal mucosa. If the mucosa gaps then bury the sutures in the mucosa, but do not have them go all the way through.

After-care consists chiefly in moving the bowels on the third day, not later, to avoid hard fecal masses. Usually a dose of castor oil is quite sufficient. If silkworm-gut is used, the sutures may be removed on the ninth day. The operation in no way inconveniences the patient or delays getting up.

I have done the operation a number of times, especially while in the Schauta Clinic in Vienna, where it is done in about 10 per cent. of primiparae, seldom on multiparae, unless they have had an extensive perineorrhaphy following a previous delivery. I will cite only three cases, all of which presented typical indications for episiotomy.

Case 1.—Mrs. E. W. M., white, American, housewife, aged 33, para 1. Interspinous 27 cm., intercristal 27 cm., intertrochanteric 31 cm., simple flat pelvis. Left occipito-anterior position. Second stage hard pains for six hours, head in vagina, pains lessening, patient tired out, fetal heart sounds good. Examination reveals a rigid, nonrelaxing perineum. Under ether anesthesia low forceps delivery made. A perineal tear was imminent, a deep mediolateral episiotomy was done. After third stage the wound was sutured in two rows, using chromic and plain catgut. Uneventful recovery, leaving small soft scar with no perineal deformity.

Case 2.—Mrs. J. K., white, American, housewife, aged 35, para 1. Normal measurements. Left occipito-anterior position. Forty-eight hours previous to onset of initial pains bag of waters broke. Second stage eight hours. Pains continuous and strong. Fetal heart sounds good. Perineum extremely high and rigid. As head emerged, notwithstanding that it was held back and lifted forward, a tear seemed unavoidable. As the anus was opening and extending forward and up, a right-sided mediolateral episiotomy was done. Closure in usual manner, uneventful recovery.

Case 3.—Mrs. L. B., American, white, housewife, aged 30, para 2. Normal measurements. Left occipito-anterior position. Five years previously had had high forceps operation resulting in dead baby and third degree tear. One year after had perineorrhaphy done, resulting in complete restoration of the perineum. Patient wanted a living child, but was afraid lest she undergo the same experience as before. She was assured that she need have no fear, and so became pregnant. She entered hospital at onset of pains. She was carefully watched, and as the pains became strong and decensus began she was removed to the delivery room. It was noticed that the perineal scar became as thin as paper and another third degree tear was imminent. Under complete ether anesthesia the head was held back and a deep mediolateral episiotomy was done. The parts immediately retracted and the head was manually delivered, lifting it as high as possible over the perineum. There was no further tear, and the wound was closed in the usual way. The result was perfect, notwithstanding that the patient was delivered of an eight and one-half pound boy.

These cases are typical. The last shows what can be done, for I feel certain had labor been allowed to go on in the usual manner a marked third degree tear would have resulted.

2. Werth, quoted by Wyder in V. Winckel's Handbuch der Geburtshuelfe, Ed. 1906, iii, 1.

One must always wait and watch before doing an epiostomy, as often it is unnecessary. Once a tear is unavoidable, an episiotomy is indicated. It is a fable to think that torn, jagged wounds heal better, or even as good as clean-cut wounds.

There is a difference of opinion in this, like in all other surgical procedures. Some good authorities advocate episiotomy, while others do not. I have written to a number of men asking their opinion of the operation and how their results compared with those following immediately repaired lacerations. The following table shows the opinions of those that replied:

TABLE SHOWING THE PRACTICE OF SOME PROMINENT OBSTETRICIANS

Name	Do You Do Episiotomy?	Do You Regard It as a Safety Measure?	Per Cent. of Cases in Which Used	Incision	Better Results Than From Immediately Repaired Lacerations
Hirst	Yes	Yes	Less than 1 per cent.	Bilateral	Yes
Skeel	Yes	Yes	Rarely	Central	Not better
Webster	Rarely	Sometimes	Very small	Bilateral	No, but less likely damage anus
Peterson	Rarely	.....	Very small	Lateral	Not better
Cragin	No	No			
Williams	One case				
DeLee	Yes	Yes, in first rank	33⅓ para 1	Mediolateral	Much better
Newell	Rarely	.....	.....	Bilateral	No, except in complete tears
Zinke	Yes	Yes	2 per cent. of all, 75 per cent. after perineorrhaphy	Central	Better
Edgar	Yes	Yes	5 per cent.	Bilateral	Yes

Hirst says that for a long time he was prejudiced against the operation, but in recent years, has been converted to it.

Edgar says that he is partial to the operation as a preserver of the sphincter ani.

DeLee has recently been using the scalpel, incising layer by layer.

The above remarks are from personal communications, recently received.

"Complications rarely occur from these incisions, union is usually primary, and serious laceration of the pelvic floor and perineum is undoubtedly prevented by this means." [3]

It is hoped that this short paper will, in a measure, help toward making clear that episiotomy is a perineal safety measure.

People's Trust Building.

PAPILLOMAS OF THE BLADDER

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When one assumes the study of papillomas of the bladder he is at once impressed by a striking paradox, i. e., while all observers agree that pathologically the large majority of these tumors show signs of malignancy, clinically we find them cured by a comparatively simple form of treatment which we know does not cure malignant growths elsewhere. In order to understand the great discrepancy between the clinical course and the pathologic findings in these cases it is necessary to consider some of their peculiarities.

The remarkably good results which have followed the treatment of these tumors by high frequency desiccation would seem to indicate that the large majority of papillary tumors are in the earlier part of their existence benign.

Of these, some continue in a benign state for many years. Caspar reports one of twenty-six years' duration and Stein one of forty-two years' duration. Others, after existing for a variable period as a benign tumor, assume the true characters of malignancy, infiltration and induration of the base, with a tendency toward metastases. This form represents the true carcinoma, is characterized clinically by ulceration, as seen through the cystoscope, and the induration can often be felt through the rectum or vagina. This type does not respond as a rule to fulguration, and calls for more radical treatment.

A third group, while not showing the usual signs of malignancy (infiltration and metastases) become clinically malignant, in that the tumors multiply by implantation, so that the bladder often becomes filled with these papillomatous masses and the patient eventually succumbs to repeated hemorrhages and prolonged sepsis.

Another fact which impresses one in the study of vesical papilloma is that the ordinary methods of treatment which were used before the advent of fulguration (excision, cauterizations, etc.) were very unsuccessful. These methods carried with them a considerable primary operative mortality (Watson, 380 cases, 10 per cent. operative mortality) with a large percentage of recurrence (Young, twenty-three cases of benign papilloma treated by cauterization and excision, only two well at end of four

3. E. P. Davis: Operative Obstetrics, 1911.

years). As Young has so well shown, nothing short of resection of the entire thickness of the bladder wall of a considerable area surrounding the tumor offers any reasonable hope of success from surgical treatment.

When one considers that a large majority of these tumors are located at the base of the bladder in close proximity to one or both ureters, and that their removal by surgical means may necessitate transplantation of one or both ureters; that it also carries with it the great danger of a spreading infection in the pelvic tissue, which past experience in prostatic and urethral surgery has proved to be so fatal, and when he also considers the exceptionally good results which have followed fulguration, he must conclude that Edwin Beer made a truly great contribution to medical science when in 1910 he suggested the use of the high frequency current in the treatment of these neoplasms.

Before dismissing the pathologic consideration of these tumors one should mention another peculiarity of them and that is their power of implantation. They are very easily disseminated by implantation. Experience in their surgical treatment has shown that they may be implanted in any part of the wound, in any part of the bladder, in the bladder incision or in the abdominal wall. Particularly interesting is Thompson-Walker's case, which showed a recurrence along the line where the retractor pressed on the mucosa.

Symptoms: Hematuria is the first and most important symptom in the large majority of cases. As Chute has so well pointed out, the failure to recognize bladder tumors in their incipiency is due to the failure of the profession to realize the importance of urinary hemorrhage, and what has been said about essential hematuria has probably misled the general practitioner. Every case of urinary hemorrhage should be investigated by all the diagnostic methods at our command until an accurate determination of the cause of the hemorrhage is made. Unless the papilloma be accompanied by cystitis or unless it be malignant the hematuria is usually painless. In perhaps the majority of cases a painless hematuria is the most important and in fact the only symptom. If the growth involves the ureter we may have renal colic, as in two of the cases here reported, and if the tumor is near the internal urethral orifice we may have urinary retention, at times due to the growth acting as a ball valve and shutting the urethra. With the advent of infection we have the symptoms of a cystitis, plus the exhaustion from sepsis and repeated hemorrhages.

Diagnosis: The appearance of a papilloma through the cystoscope has been well likened to a sea anemone. It looks not unlike an aggregation of nasal and uterine polypi except that individual polypi are much smaller and much more numerous. The important problem is to determine whether or not a given papillary growth is malignant. Of course the great majority of nonpapillary growths in the bladder are malignant, but the papillary neoplasm may be either malignant or benign.

The following signs are very suggestive of malignancy:

1. Ulceration: An ulcerated neoplasm, especially if one can make out an infiltration along the edge of the ulcer is almost sure to be malignant.

2. Infiltration and induration of the base of the growth either as seen through the cystoscope or felt through the vagina or rectum.

3. Hemorrhage and dysuria persisting in spite of treatment. Treatment by fulguration nearly always relieves the hemorrhage in these cases very quickly, and if the hemorrhage persists in spite of treatment, especially if it is accompanied by an urgent, frequent and painful urination, it is very suggestive of malignancy. Having determined that we have a benign papilloma, there is only one justifiable form of treatment. The high frequency desiccation has proved so superior, not only in the simplicity of its application, but in the permanency of its results, that, as B. A. Thomas says, "It is a question whether a patient should ever be subjected to the radical treatment when high frequency is available."

The technic of its application is to pass a catheterizing cystoscope loaded with a small insulated wire into the bladder previously filled with water. This fine wire is connected with a high frequency apparatus, of which the Wappler instrument is as good as any. The wire is brought in contact with the papilloma and the current turned on for a few seconds. This repeated until a considerable section of the growth is destroyed. These treatments are repeated at intervals of ten to fourteen days until the entire papilloma has disappeared. During the flow of the current one sees a rapid ebullition of hydrogen bubbles like the bubbles of carbon dioxid in soda water as it is drawn from the fountain. These cases should be examined from time to time for recurrence.

The following cases illustrate some of the important points in diagnosis and treatment of the affection:

CASE 1.—March 19, 1912, I was called to see a patient, aged 35 years, who was unable to urinate. She was perfectly normal otherwise and gave no history except during the past year, on three or four occasions, she had some difficulty in passing urine, but had never had to be catheterized.

Examination showed her bladder to be distended one half way to navel. She was catheterized and requested to come to the office the following day when a cystoscopic examination was made and a small papilloma was discovered which was located between the right urethral orifice and the internal opening of the urethra. This was treated by high frequency desiccation, the patient receiving ten treatments at intervals of ten to twelve days.

Now at the end of two years she has never had a recurrence of her symptoms and a bladder examination within the last three months showed the bladder to be perfectly normal.

CASE 2.—Patient, a woman, aged 40, operated on Feb. 2, 1913, for uterine fibroid and an intestinal obstruction, the latter being due to a knuckle of small intestines becoming incarcerated between the fibroid and the pelvic wall. Obstruction relieved and fibroid removed by supravaginal hysterectomy. Returned home following an uneventful recovery at the end of two weeks. The following day she had a most intense attack of right-sided renal colic, accompanied by vomiting and marked pain over the right kidney. This colic was repeated the next day and the day following, but with less severity.

From then on she had great soreness in the region of the right kidney, which was aggravated by motion and which lasted a week. Urine during this time contained considerable amount of blood.

The symptoms gradually subsided and were followed by those of an irritated bladder which had existed more or less for the last year, but much worse since this last attack of renal colic. These symptoms coming on so soon after her operation made me think of the possibility of having a ligated ureter, but I could not understand if such had been the case how her symptoms could have been postponed for two weeks after her operation.

As soon as she was able to come to the office a cystoscopic examination was made, which revealed a papilloma involving the lower end of the right ureter and extending half way down to the internal urethral orifice. This was submitted to six high frequency treatments, when the papilloma had entirely disappeared.

She has been perfectly free from symptoms now for over eighteen months and examination of bladder within the past three months shows it to be normal.

CASE 3.—Man, aged 52, three weeks before I saw him, was taken with burning pain in bladder and urine became scanty, high-colored and finally bloody. At the end of a week of the onset of the symptom, he had an intense right-sided renal colic accompanied by vomiting. This was followed by more or less discomfort in the region of the kidney, which has persisted ever since. Five days before I saw him he had a pain on left side just inside of crest of ilium of sufficient severity to require a hypodermic. Symptoms at time of examination: pain practically constant in right kidney, frequent urination and blood constantly in urine for past three weeks.

Examination.—Marked emaciation. Lost five pounds in last three months. Right kidney palpable and tender, prostate moderately enlarged and massage of it causes a bloody serum to exude from the penis. Roentgen-ray plates negative for stone. Cystoscopic examination reveals a papilloma just above right urethral orifice and another smaller one above left urethral orifice. Urethral catheter No. 4 passed one-half inch into each ureter apparently meeting an obstruction and will not pass higher.

After ten high frequency treatments the bladder was perfectly free from any evidence of papilloma. He had gained twelve pounds in weight and was free from symptoms. At the end of seven months he returned showing a gain of five pounds more in weight, but saying that for past two weeks he had had some pain at base of bladder radiating to left kidney. Cystoscopic examination showed a recurrence just at the outer side of left urethral orifice, which was removed by two high frequency treatments. He has been free from symptoms now for past four months. Examination Oct. 8, 1914, bladder free from any evidence of papilloma.

CASE 4.—Woman, aged 38, two children, has always enjoyed perfect health; except for past six months, has had a painless hematuria. During this time does not remember of passing urine not tinged with blood. No undue frequency and no pain on urination. The only pains she has are occasional attacks which make her feel as if she wanted to bend over. Pelvic examination negative. Urine shows a large amount of blood microscopically. Moderate amount of albumin. Cystoscopic examination shows a papilloma just inside the internal urethral orifice, extending from about the median line in front to a little beyond the median line posteriorly and extending upward almost to the left urethral meatus.

She has received twenty high frequency treatments. The hematuria and the papilloma have disappeared, but she is still under observation. This case has required a little more than the usual number of treatments on account of the location and size of the growth.

COMPLETE INTRA-PLACENTAL UTERINE RUPTURE DURING LABOR

REPORT OF CASE

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Rupture of the pregnant uterus is said to be the most serious of all obstetric lesions. Dr. Jolly, of Paris, found in the records of 782,741 labors only two hundred and thirty cases of ruptured uterus of all varieties. That is about one case in 3,400 labors. A complete rupture through the placental site is one of the rarest varieties of uterine rupture and, on account of the usual impossibility of giving immediate surgical attention, results fatally for mother and child, as in the following case in my practice.

On the morning of Feb. 8, 1915, I was called to examine Lillie G., age 23, pregnant at term. Prior to her marriage there was a history of general good health. Since that event she had undergone a series of six abortions ranging from two to three months, also an attack of typhoid fever. During this pregnancy she had had no symptoms of threatened miscarriage but for two weeks had been having more or less discomfort and uterine pains.

Upon my arrival at her bedside about 9 a. m. I examined her per vaginam, finding an undilated os uteri, cervix projecting, a head presentation, a fetus living but lying very obliquely in uterus. The pains were mild and apparently ineffectual. The membranes had evidently ruptured the previous night, at least to some extent, as there had been considerable escape of fluid at one time. A dark yellow discharge of foul odor was escaping slowly from the uterus.

In order that the pains might act to better advantage, I manipulated the fetus very gently and without any discomfort to the patient, so that its longitudinal axis nearly corresponded with that of the uterus. Immediately more nearly normal labor pains supervened and recurred at regular intervals. There yet being no material dilatation of the os, and believing my patient safe, I left her with experienced but untrained attendants who were to report to me the apparent progress of her labor. Several labor pains occurred after my departure. Then the character of pains altered suddenly and a general abdominal discomfort supervened. The patient became conscious that a distinct change in her condition had occurred and called me again at 2 p. m., which call I answered immediately. I found the woman with pulse 145 to 150, pallid countenance, cold extremities, sighing respiration, numbness in extremities and a sense of impending death. Dilatation to the extent of a silver quarter had taken place. There was no evidence of blood escaping from the os or vagina. The abdominal cavity was distended evenly with fluid. Diagnosis of internal hemorrhage was made, consultation was asked for and after delay secured. There was no trained assistance at hand and in the absence of the patient's husband and father I did not feel justified in doing an emergency operation in the private house.

A consultant upon arrival attempted to revive the patient with saline solution per rectum. This was not retained. The patient was taken to St. John's Hospital where infusion of normal salt solution was injected into veins and submammary tissue and oxygen inhalation was given. The patient failed to respond and death appearing inevitable she was placed on the operating table, ether administered, and a Cesarean section performed.

Upon abdominal incision, large amounts of free and clotted blood escaped from the opening. A pale, limpid fetus was at once delivered from the uterus and resuscitative measures applied to it.. It showed evidences of life at no time. There appeared at about the medium point on the fundus of the uterus on the left side and through the attached placenta a linear tear about three inches in length. There was no part of the fetus projecting through the tear. The lining of the uterus was of a dirty yellow color and evidences of degeneration of the uterine tissue were present. On account of the tear being through the placental margin, the uterus was removed entire. Unfortunately the patient, being moribund, expired on the table.

I believe this terrible accident to have been caused solely by a weakened uterine wall due to the succession of abortions which she had undergone.

Smallpox Has Plagued Princeton for several weeks. On July 17, twenty-eight cases were reported from Patoka, Fort Branch, Oakland City and Owensville. The Gibson County Health Commissioner has started a campaign of wholesale vaccination. The officials, witnesses and spectators in Justice Sproul's court room were quarantined early in July because a well-developed case of smallpox appeared in the court. At Patoka the postoffice was closed and fumigated because the postmaster, Earl Turpin, was stricken with the disease.

FRANK B. WYNN
President Indiana State Medical Association, 1914-1915

OFFICERS OF THE INDIANA STATE MEDICAL ASSOCIATION, 1914-1915

O. J. GRONENDYKE
CHAIRMAN MEDICAL SECTION
NEWCASTLE

EDWIN WALKER
CHAIRMAN SURGICAL SECTION
EVANSVILLE

JOHN F. BARNHILL
CHAIRMAN EYE, EAR, NOSE AND THROAT SECTION
INDIANAPOLIS

E. M. SHANKLIN
SEC. EYE, EAR NOSE & THROAT SECTION
HAMMOND

T. B. EASTMAN
SECRETARY SURGICAL SECTION
INDIANAPOLIS

OFFICERS OF THE SECTIONS

THE INDIANAPOLIS SESSION

THE INDIANAPOLIS SESSION

The annual session of the Indiana State Medical Association will be held in Indianapolis, Wednesday, Thursday, and Friday, Sept. 22, 23, and 24, 1915. The attendance should be as large as any in the history of the Association, for Indianapolis is not only centrally located, easy of access, and owing to its size is amply able to care for all visitors, but this year's program is especially attractive with its large number of interesting papers, addresses by leading men outside of the state, and the scientific demonstrations which are introduced for the first time.[1]

There are many hospitals in Indianapolis, both public and private, including institutions for the insane, the blind, and the deaf and dumb, that are supported by the state. They are as fully equipped and as ably conducted as any in the country. The state hospital is under the control of a superintendent appointed by the department of public health and charities, assisted by interns who are graduated from the regular medical colleges and are selected by a board of examiners appointed by the board of health. The Indianapolis Training School for Nurses is conducted in this institution, under the charge of the hospital authorities.

The Robert W. Long Hospital is a thoroughly equipped, up-to-date hospital maintained at Indianapolis by the State University of Indiana. It is intended especially for patients from the rural districts of the state and from towns too small to support municipal hospitals. This hospital was made possible by the generosity of the late Dr. Robert W. Long of Indianapolis and his wife, who donated money and property to the value of $240,000 for the purpose on the condition that it should be maintained by the state and conducted in connection with the Indiana University School of Medicine. It is, therefore, a teaching hospital, and in consequence the patients are guaranteed the best of medical and surgical care, for where the students are best taught how to treat the patients, there the patients receive the best treatment. The hospital is located upon twenty acres of ground in West Indianapolis upon a site which allows for the expansion of the institution, which is certain to follow. It was formally opened for patients on June 15, 1914, and thirteen months from the date the hospital was opened the number of admissions have been nearly fifteen hundred. In addition about three hundred out-patients from various state institutions have been treated. There is no dispensary in direct connection with the hospital. The hospital is a part of the Indiana University School of Medicine. It has no separate organization and it has no hospital staff in the usual acceptance of that term. All the members of the medical faculty of the Indiana University constitute the staff of this hospital. The care of the patient is under the immediate control of the educational committee of the medical school, which committee assigns the work of the hospital to the members of the teaching staff. The resident staff consists of graduates of the Indiana University who give their entire time to the hospital service. In connection with the hospital is the Training School for Nurses, one of the very few training schools of university grade in this country. Applicants for admission must conform to all the requirements of the College of Liberal Arts of Indiana University. All courses are given by officers of the university and are of collegiate grade. Students who successfully complete these courses receive university credit. The training work requires three years for completion. Those who before admission shall have completed three years of college work are given credit for six months of hospital work, and at the completion of the two and one-half years' course in the training school receive the degree of Bachelor of Arts from Indiana University.

St. Vincent's Hospital, under the auspices of the Catholic Church of Indianapolis; the Deaconess Hospital, under the auspices of the Methodists of Indiana; the Protestant Deaconess Home and Hospital, under the auspices of the German Protestant Church, the Eleanor Hospital, belonging to and controlled by the Flower Mission and maintained by public subscription, are among the other prominent and up-to-date Indianapolis institutions. With the exception of the Eleanor Hospital, which is a hospital for sick children of the poor, all of

1. For the benefit of the newer members of the Association, we reproduce some of the descriptive matter which we bave published heretofore concerning features whicb, independent of the fact that it has been selected as a meeting place for the annual session of the Association, make Indianapolis worthy of a visit. Aside from the fact that Indianapolis is the capital of the state and the largest city in the state, with its nearly 300,000 inhabitants, it possesses many features that attract the attention of the casual visitor and are of special interest to Indiana physicians. It has public buildings that are noteworthy, parks that are models of heauty, and the institutions of learning take leading rank. The Medical Department of the Indiana University is located here, and should be better known and more cordially supported by the members of the medical profession.

these institutions maintain training schools for nurses. The Indiana State School for the Deaf is neither a benevolent nor a charitable institution, but an educational institution conducted wholly as such. The Central Indiana Hospital for the Insane is a state institution and is one of the best of its kind in the country. The grounds embrace 160 acres and present a beautiful park-like appearance, adorned with magnificent native forest trees, shrubbery and flowers. The Indiana Institute for the Education of the Blind is a state institution and occupies one of the most beautiful residence sections of the city. The Asylum for Incurably Insane, another state institution, is thoroughly modern in every respect, having accommodations for 150 inmates.

The City Dispensary is under the control of a superintendent, who is appointed by the Board of Public Health and Charities, assisted by five interns. Here the poor may receive free services, and the dispensary maintains an ambulance service and responds to emergency calls. Bobb's Free Dispensary is operated in connection with the Indiana University School of Medicine.

There are several private hospitals or sanatoriums, chief among which are Neuronhurst, or commonly known as Fletcher's Sanatorium, and The Norways, sometimes known as Dr. Sterne's Sanatorium. Neuronhurst was established many years ago by the late Dr. W. B. Fletcher, and is now efficiently conducted by his successor, Dr. Mary A. Spink. The Norways has been in operation for many years under the ownership and management of Drs. Albert E. Sterne and Charles D. Humes.

To the medical men, the Indiana University School of Medicine is of special interest. It is the only medical institution in the state. It is controlled by the state, and receives its support from the legislature. The school was established and has been conducted on the plans approved by the highest authorities in medical education. It is the aim of the trustees of the university to provide the student in medicine the best opportunities to secure the most thorough medical training. To this end the first two or purely laboratory years are given in the extensive laboratories of the university at Bloomington, under the guidance of thoroughly trained and paid instructors, and the last two years are given in the well-equipped laboratories and lecture-rooms of the medical college at Indianapolis. A special feature of the course is the clinical instruction given at the Robert W. Long Hospital, which is the teaching hospital of the university. The students also have the advantage of clinical facilities offered by the Bobb's Free Dispensary conducted in the college building on Senate Avenue, and have access to the various hospitals where members of the faculty engage in carrying on teaching.

There are many places of interest to visit in and around Indianapolis. Fort Benjamin Harrison is located about eleven miles northeast of the city, where the government has arranged for the care of a regiment of regulars. This post is regarded as one of the best equipped in the United States. It is reached by electric cars every hour from the center of the city. The Masonic Temple of Indianapolis is one of the most beautiful of its kind in the country,

DAVID ROSS
Chairman of Committee on Arrangements

being massive and of a monumental character. The Odd Fellows Building and Grand Lodge Hall is one of the most notable additions to the many fine structures that have been erected in Indianapolis in recent years. The auditorium of this building, located on the top floor, will seat 1,500 persons. The Murat Temple of the Shriners is one of the most unique buildings in America. In it is located the Murat Theater.

One of the city's chief adornments is the Indiana Soldiers' and Sailors' Monument, which is one of the few real works of art along this line to be found in America. It is con-

structed of Indiana limestone in a park having an area of between three and four acres. The monument, including the crowning figure, is 284½ feet in height, and the top of the monument is reached by an elevator and stairway from the base of the interior of the shaft. A magnificent view of the city of Indianapolis and the surrounding country is obtained from the top of the monument. Four epochs in the history of Indiana are commemorated by bronze statues of representative men of the times, occupying positions around the monument between the converging points of the intersecting streets. These are the period of the Revolution, represented by a statue of George Rogers Clark; the war with Mexico, by a statue of Governor Whitcomb; the War of 1812 and the battle of Tippecanoe, by the statue of William Henry Harrison, and the War for the Union by Indiana's great war governor, Oliver P. Morton.

Among other statues to be found on the boulevards or in the parks are those of Schuyler Colfax, who was the first citizen of Indiana to reach the vice-presidential chair. This statue is found in University Park. Governor, senator and vice-president of the United States, Thomas A. Hendricks, was one of the distinguished sons of Indiana, and to him the people of Indiana have erected a bronze statue, located on the State House grounds. Two allegorical statues representing History and Peace stand on the base of the Hendricks statue. General Henry W. Lawton, who was killed in the Philippine Islands during the Spanish-American War, is honored by a statue located on the county court house grounds. It is a tribute to his memory by the people of Indiana. Tribute to Governor Morton, the war governor of Indiana, is offered in the Morton statue, found at the east entrance of the State House. The Benjamin Harrison monument was erected in University Park, opposite the Federal Building.

Indianapolis has a large number of beautiful parks, among which may be named Riverside Park, Garfield Park, Military Park, Brookside Park, Fairview Park and numerous other park squares.

CLAYPOOL HOTEL, WHERE ALL THE MEETINGS OF THE INDIANAPOLIS SESSION WILL BE HELD

Indianapolis boasts many large and important manufacturing concerns, but medical men are particularly interested in those which manufacture or supply the wants of physicians. One of the most interesting institutions of Indianapolis to physicians is the large plant of Eli Lilly & Company, devoted to the manufacture of prescription supplies. As this class of work is extremely technical it is necessary to maintain many laboratories for testing and research work. For a number of years the scientific department of Eli Lilly & Company has grown so rapidly that a special building became necessary. Members of the Indiana State Medical Association who desire to see this department or the entire plant of Eli Lilly & Company will

be cordially welcomed. Competent guides will be available for an inspection trip at any time during business hours. The laboratory may be reached from the center of the city by taking a Garfield Park car to McCarty Street.

The Pitman-Moore Company is another manufacturing house, making prescription specialties, which is of interest to physicians. This house makes a specialty of standardization processes, and emphasizes the importance of having drugs physiologically standardized in order to obtain the desired effect and know the quantity of a drug required in order to obtain such an effect. This firm has a plant at 111 North Capitol Avenue, with a biological laboratory at Zionsville, Ind., and extends a cordial invitation to visitors to the coming session of the Indiana State Medical Association.

The Swan-Myers Company, located at 219 North Senate Avenue, are pharmaceutical chemists, and quite recently have opened a clinical laboratory in conjunction with their bacteriological department. They not only furnish autogenous and stock vaccines, but are prepared to do all kinds of laboratory work needed to complete a diagnosis.

Of dealers in surgical instruments and physicians' equipment there are several well-known firms in Indianapolis. The reorganized William H. Armstrong Company, located at 34 West Ohio Street, carries a full line of surgical instruments and orthopedic equipment. The Dugan-Johnson Company is another well-known Indianapolis firm handling surgical instruments and appliances; and the W. D. Allison Company, 906 North Alabama Street, is a maker of everything in the way of office furniture for physicians, including operating chairs and tables, dressing stands, instrument cases, etc.

Indianapolis is well supplied with excellent hotels, restaurants and clubs. The Claypool Hotel, one of the finest hotels in the middle states, where all the meetings of the Association will be held, is centrally located and will provide ample accommodation for all members who desire to stop there, as also abundant room for all the activities of the Association.

Aside from the fact that medical schools, hospitals, manufacturing houses, and numerous places of interest offer attractions, the medical profession of Indianapolis is an active force in maintaining the scientific and social standing of the Indiana State Medical Association, and as host offers a cordial welcome and generous hospitality to all members. The officers have secured a program of scientific papers that promises excellence not heretofore attained.

It is therefore with a feeling of anticipation and pleasure that the members of the Association look forward to this years' session, and the attendance should be a record-breaker.

ARRANGEMENTS

The committee on arrangements announces that no effort has been spared to insure the success of the Indianapolis session. The headquarters and place for the meetings of the various sections and the House of Delegates will be the Claypool Hotel, located most conveniently at the northeast corner of Washington and Illinois streets. It is only a short walk from both the railroad and interurban stations, and all street car lines lead to it. The courtesies of the hotel are extended to all members of the Indiana State Medical Association. Refreshments of all kinds may be enjoyed any time during the session. The general meetings as well as the meetings of the Section on Medicine will be held in the Auditorium; the meetings of the Section on Surgery will be held in the Palm Room; and the meetings of the Section on Eye, Ear, Nose and Throat will be held in the Florentine Room on the parlor floor. On Thursday afternoon the scientific demonstrations will be given at the college building of the Indiana University School of Medicine, facing the capitol, on Senate Avenue, but two blocks distance from the Claypool. The commercial exhibit will be at the Claypool in rooms adjoining the Auditorium.

ENTERTAINMENT

The Indianapolis Medical Society will give a smoker for the members of the Indiana State Medical Association at the Claypool Hotel at 9 p. m. on Wednesday evening, September 22. It will be a stag affair and strictly informal. All members of the Association are cordially invited to be present, as it is one feature of the session which enables members to get together and renew old and form new acquaintanceships. On Thursday afternoon automobiles will be in waiting at the Claypool Hotel at 1:30 to take the visiting ladies on a ride about the city and end at the country home of Dr. and Mrs. David Ross, north of Broad Ripple, where light refreshments will be served.

Thursday evening, at six thirty, a dinner will be given in the Henry IV Room of the Claypool Hotel for the doctors and their wives. At this dinner addresses are to be made by Drs. W. J. Mayo, C. C. Bass, and E. C. Rosenow. The price of this dinner is $1.50 per plate, and the tickets for the same are to be secured at the time of registration. No member should miss this dinner.

On Friday at 12:30 p. m. the women physicians are to be entertained at luncheon by Dr. Spink at the Fletcher Sanatorium. Those who expect to attend should notify Dr. Ada E. Schweitzer, 202 Gallup Block, Indianapolis, at once.

The committee on arrangements earnestly desires and requests that no private clinics be held for the attending members of the Association at any time when such clinics will interfere with the scientific meetings.

INDIANA UNIVERSITY SCHOOL OF MEDICINE

HOTELS

The committee has submitted the following list of hotels and their rates, and urges that members make early reservations:

Claypool Hotel, European plan; rooms without bath, $1.50 to $2 and $2.50 per day; rooms with bath, $2.50 to $3 and $3.50 per day.

Severin Hotel, European plan; rates $1.50 and up.

Denison Hotel, European plan, $1 to $4 per day; American plan, $3 to $5 per day.

English Hotel, European plan, without bath, $1.50 per day; with bath, $2 and $2.50 per day; American plan, $2.50 per day, and up.

Washington Hotel, European plan, rates $1 and up.

These are the hotels which the committee recommends, inasmuch as they are accessible to the place of meetings.

REGISTRATION

It is requested that immediately upon arrival at Indianapolis members of the Association should proceed at once to the registration bureau of the Association, at the Claypool Hotel, and register. Registration will be by membership card, and to avoid delays and confusion members are urged to have their cards ready for inspection by the registration committee. Registering members are requested to indicate the number of ladies in the party so that the

committee on entertainment of the visiting ladies may know early the number to be provided for. Badges will be furnished the members for identification.

Letters and telegrams may be sent to the Claypool Hotel in charge of the committee on registration.

OFFICIAL CALL TO THE HOUSE OF DELEGATES

The next annual session of the Indiana State Medical Association will be held at Indianapolis on Wednesday, Thursday and Friday, September 22, 23 and 24, 1915. On a basis of ratio established by the by-laws ("Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each major fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate"), there will be a possible 111 delegates, distributed by counties as follows: Marion County, 6; Allen, Vanderburg, Vigo and Lake, each 2; the other eighty-two counties, each 1; the thirteen councilors and the president and secretary of the Association. County medical society secretaries must see to it that credentials for the delegates are in the hands of Dr. Allen Pierson, Spencer, Ind., on or before the first called meeting. No delegate will be seated unless wearing the official badge. The House of Delegates will convene promptly at 7 p. m., Wednesday, September 22, at the Claypool Hotel and again at 11:30 a. m., Friday.

The order of business will be as follows:

1. Call to order by the president.
2. Roll call and seating of qualified delegates.
3. Reading of minutes of previous meeting.
4. Reports of officers:
   (a) Secretary.
   (b) Treasurer.
5. Report of standing committees:
   (a) Arrangements.
   (b) Scientific Work.
   (c) Scientific Demonstrations.
   (d) Physicians' Welfare.
   (e) The Problem of Quackery and Nostrum Consumption
   (f) Social Service in Relation to the Public Health.
   (g) The Problem of Criminal Abortion, Its Increasing Prevalence, and to Recommend Ways and Means for Arousing the Public Conscience Upon This Question.
   (h) Health and Public Instruction.
   (i) Public Policy and Legislation.
   (j) Credentials.
   (k) Publication.
   (l) Necrology.
   (m) Medical Defense.
6. Reading of Communications.
7. Reading of Memorials and Resolutions.
8. Unfinished Business.
9. New Business.

The attention of the delegates is called to the following amendment to the Constitution which was presented at the last annual session by Dr. Davidson. The amendment was to substitute the following for Section 2, Article IX:

"The officers, except the councilors, shall be elected annually and shall serve for the next fiscal year following the annual session. The councilors shall take office the following January 1st after being elected by their respective district societies and shall serve for three fiscal years."

Election of officers will be the first order of business Friday morning. In addition to the regular officers, the terms of the following expire January 1, 1916, and their successors must be elected at this session: Committee on Medical Defense, J. Rilus Eastman; delegates to the American Medical Association, J. Rilus Eastman, Edwin Walker; alternates, Geo. R. Osborn, T. F. Spink.

Since he could not attend as alternate, Dr. Spink kindly resigned just previous to the San Francisco session of the A. M. A. to allow the secretary to be appointed. Neither the fourth delegate nor any of the four alternates could attend this session, and this change was made at the last minute in order to secure for Indiana her four delegates. The attention of the House is called to this incident as it is highly important to elect only such delegates and alternates as can be reasonably sure of representing the Association. Nominations for these offices should only be made from a list of members who habitually attend the annual sessions of the American Medical Association.

CHARLES N. COMBS, Secretary.

ANNOUNCEMENT OF COMMITTEE ON CREDENTIALS

House of Delegates, Indiana State Medical Association, Gentlemen:

It has been enacted into a law of the Association that the credentials of the delegates be in the hands of the Committee on Credentials before the first day of the annual session; this for the purpose of preventing confusion and for saving the time that should be wholly occupied otherwise in the business of the House of Delegates.

It is hoped that the secretaries of the county societies will see to it that this law is observed; that in the interval between the publication of this report and the first day of the Indianapolis session those who have not already done so will forward the names of their delegates.

Chairman of Committee on Credentials,
Allen Pierson,
Spencer, Ind.

ANNOUNCEMENT OF THE COMMITTEE ON SCIENTIFIC WORK

It is considered desirable to admonish essayists and discussants to be brief and to keep within their subjects; furthermore, to be prompt, to the end that the somewhat lengthy program may be completed duly. The committee also wishes herewith to call attention to the importance of communication between essayists and their discussants previous to the session. If possible, copies of papers should be submitted to the appointed discussants. The presentation of illustrative cases will add much to the value of essays.

Very respectfully,
Thomas B. Eastman,
Eldridge M. Shanklin,
John A. McDonald.

ANNOUNCEMENT OF THE PRESIDENT CONCERNING QUESTIONS ASKED BY COMMITTEES

Herewith is appended three groups of interrogatories prepared by the secretaries of the committee on physicians' welfare, the committee to study the problem of criminal abortion; and the committee on quackery and nostrum consumption.

These interrogatories already have been mailed to the members of the Indiana State Medical Association. Every member should peruse these questions with care and answer each lucidly. They are questions of great importance to the physicians generally. Let each member contribute his part toward trying to solve some of our own problems. Members need not sign these reports unless they so desire. Above all, fill out the blanks at once and mail to Dr. David Ross, 416 Board of Trade Building, Indianapolis.

If for any reason any member has lost or mislaid his copy of these interrogatories he is

THE ROBERT W. LONG HOSPITAL, INDIANA UNIVERSITY SCHOOL OF MEDICINE

respectfully asked to refer to the questions as herewith published and send in his answers by numbers corresponding to the questions asked.

Respectfully,

Frank B. Wynn, President.

COMMITTEE ON PHYSICIANS' WELFARE

1. What is the population of your town or city?

2. Are you a general practitioner?

3. If a specialist, what kind?

4. Can the Indiana State Medical Association do anything to help you or the physicians of your community?

5. If you have any grievance against brother practitioners, state what they are.

6. Are you satisfied with the work your local society is doing? What can you suggest to make it better?

7. In chronic diseases of obscure nature where you desire diagnostic aid, are you ever perplexed to decide what kind of a specialist should see the case?

8. Do you ever find patients complaining that they are buffeted about from one to another specialist, often entailing great time and expense before diagnosis is made?

9. In view of the above, how would you and how in your opinion would the profession look on the establishment of diagnostic clinics in the larger cities, the purpose of which would be to make complete examinations (laboratory findings, Roentgen-ray diagnosis, special clinical and physical examinations, etc.) provided the staff of such clinic referred back the cases to the doctor sending the same, with complete report—charts, data and recommendations?

10. Considering the paternalistic trend of the state in preventive medicine, what would you think of a state diagnostic clinic, the staff of the same to be salaried and prevented from practicing medicine or surgery for fees; the fees charged in this case going to the support of the clinic?

11. What medical journals do you read?

12. Do you take any postgraduate courses?

13. Are you in the habit of attending the county, state or national association meetings?

14. Are you imposed on by the laity? In what way?

15. What burdens have you peculiar to your locality?

16. Are you employed by a corporation? What capacity? Do you receive salary or fee? Is it enough?

17. What is the minimum fee you receive for insurance examinations?

18. Are your fees in practice commensurate with the service rendered and the high cost of living?

19. What is your fee for obstetrics? Consultation? Office call? Residence call?

20. Do you dispense or prescribe? What is your drug bill each year? Is your extra charge for dispensing equal to the charge of a druggist?

21. If the custom-established fees of the community are too low, what in your judgment should be done?

22. What per cent. do you collect?

23. Do you take vacations? How often? How long?

24. Do you take recreation at home? What kind?

25. Have you a copy of the code of ethics? (If not, you may secure one by writing the *Journal of the American Medical Association.*) Are you familiar with its principles and do you endeavor to govern your professional action accordingly?

Respectfully,

Alfred Henry,
Secretary Committee.

COMMITTEE TO STUDY QUACKERY AND NOSTRUM CONSUMPTION

1. Have the efforts to educate the public regarding the nature and evil effects of "patent medicines" had the effect in your neighborhood to reduce their use?

2. To what extent is their use due to the activity of the druggist? To what extent the grocer?

3. Does the sale of the various beauty preparations, drug and liquor cures which are promulgated by the writing of so-called personal letters to possible users flourish in your neighborhood?

4. Would a protest to the publishers of your local papers from your medical society against the publication of "patent medicine" and quack specialist advertising be a feasible plan to combat this evil in your section?

5. How many advertising doctors are practicing in your locality? Give names. Has their number been abated by the present law?

6. Are you familiar with our state and national laws regarding untruthful and grossly overdrawn medical advertising?

7. Would you, if occasion demanded, join with your local society and the county prosecutor in a movement to suppress such advertising in accordance with law?

8. Of the thousands of proprietary remedies made in the United States and elsewhere, what ones do you consider of real value?

9. Laymen have no doubt asked you the difference between a patent and a proprietary medicine. Will you have the kindness to give here your definition of the difference as given to them?

10. Have you ever compared the advertisement of certain proprietaries and patent medicines, noting the striking similarity in the extravagant claims made by each?

11. When prescribing a proprietary remedy have you ever examined the National Formulary to ascertain if the same could not be easily made by a good pharmacist?

12. Can you not now name remedies flaunted to the public through the lay press which formerly you may have prescribed as proprietaries?

13. Are you familiar with the Herculean work being done by the Council on Pharmacy and Chemistry of the American Medical Association in trying to determine the constitution and value and to prove the truthfulness or untruthfulness of claims concerning thousands of proprietaries?

14. Do you make it a habit before prescribing a proprietary to ascertain if it has been endorsed by the American Medical Association?

Respectfully,

Frederick C. Warfel,
Secretary Committee.

COMMITTEE TO STUDY THE PROBLEM OF CRIMINAL ABORTION

1. In your judgment is the practice of criminal abortion becoming more prevalent?

2. If so, is it because physicians are growing more lax in their consideration of the physical and moral gravity of it?

3. What is your observation as to the attitude of the church and church people toward the practice?

4. In your experience what conditions among married persons most frequently prompt the request?

5. Does the request come more frequently from the husband and wife who have or have not children?

6. In refusing to perform abortion yourself, what arguments have you found most effective to dissuade persons so disposed from the act?

7. Is it better to appeal to the woman's moral sense? . . . To hold up the picture of idealism and happiness which comes to woman from the bearing of children? . . . Or, is it better to frighten her by narration of the serious consequences which may follow? . . .

8. What method have you to propose to arouse the public conscience on this question?

9. What in your judgment is the best way to reach the criminal abortionist?

10. When you are called to a case where the criminal abortionist has begun the work, and left you the disagreeable task of further care of a serious condition, what is your method in safeguarding your own reputation?

11. Is the practice of self-abortion growing more prevalent, or less?

12. What methods have you found the laity employing to induce abortion?

13. Kindly make here statement of any knowledge or views you may have regarding criminal abortion.

Respectfully,

Arthur Guedel,
Secretary Committee.

CONDENSED PROGRAM

Wednesday, September 22

AFTERNOON

Meeting of the Council at 5 p. m. in the Florentine Room, parlor floor, Claypool Hotel.

EVENING

Meeting of the House of Delegates, Palm Room, Claypool Hotel, 7 p. m.

Informal smoker, Auditorium, Claypool Hotel, 9 p. m.

Thursday, September 23

MORNING

General meeting, Auditorium, Claypool Hotel, 8:30 a. m.

Meeting of Section on Eye, Ear, Nose and Throat, Florentine Room, parlor floor, Claypool Hotel, 10:30 a. m.

AFTERNOON

Automobile ride for the ladies, starting at the Claypool Hotel at 1:30 p. m.

Scientific Demonstrations from 2 to 5 p. m. at the Indiana University School of Medicine on Senate Avenue.

Meeting of Section on Eye, Ear, Nose and Throat, Florentine Room, parlor floor, Claypool Hotel, at 2 p. m.

EVENING

Dinner at 6:30, Henry IV Room, Claypool Hotel, tickets $1.50 per person.

General Meeting, Auditorium, Claypool Hotel, 8 p. m. Addresses by William J. Mayo, Rochester; C. C. Bass, New Orleans; and E. C. Rosenow, Rochester.

Friday, September 24

MORNING

All section meetings, 9 a. m. Section on Medicine, Auditorium, Claypool Hotel; Section on Surgery, Palm Room, Claypool Hotel; Section on Eye, Ear, Nose and Throat, Florentine Room, parlor floor, Claypool Hotel.

Meeting of House of Delegates, Henry IV Room, Claypool Hotel, 11 a. m.

Meeting of Council immediately following adjournment of House of Delegates, Henry IV Room, Claypool Hotel.

Luncheon for women physicians at Neuronhurst, 1140 East Market street, at 12:30.

AFTERNOON

General Meeting, Auditorium, Claypool Hotel, 2 p. m.

OFFICIAL PROGRAM OF THE ANNUAL SESSION OF THE INDIANA STATE MEDICAL ASSOCIATION

To Be Held at Indianapolis, Sept. 22, 23, 24, 1915

HOUSE OF DELEGATES

First meeting, Palm Room, Claypool Hotel, Wednesday evening, September 22, at 7 p. m.

Second meeting, Henry IV Room, Claypool Hotel, Friday morning, September 24, at 11 a. m.

COUNCIL

First meeting, Wednesday, September 22, Florentine Room, parlor floor, Claypool Hotel, at 5 p. m.

Final meeting, Henry IV Room, Claypool Hotel, Friday, September 24, immediately following adjournment of the final meeting of the House of Delegates.

Additional meetings are at the call of the President of the Council.

GENERAL MEETINGS

(Auditorium of the Claypool Hotel)

Thursday, September 23, 8:30 to 11 a. m.
Thursday, September 23, 8 p. m.
Friday, September 24, 2 p. m.

SECTION ON MEDICINE

(Auditorium of the Claypool Hotel)

Thursday, September 23, 11 a. m.
Friday, September 24, 9 a. m.

SECTION ON SURGERY

(Palm Room of the Claypool Hotel)

Thursday, September 23, 11 a. m.
Friday, September 24, 9 a. m.

SECTION ON EYE, EAR, NOSE AND THROAT

(Florentine Room, Parlor Floor, Claypool Hotel)

Thursday, September 23, 10:30 a. m.
Thursday, September 23, 2 p. m.
Friday, September 24, 9 a. m.

SCIENTIFIC DEMONSTRATIONS

(Indiana University School of Medicine)

Senate Avenue, opposite Capitol

Thursday, September 23, 2 p. m.

ENTERTAINMENTS

Wednesday, September 22, at 9 p. m., Smoker in Auditorium, Claypool Hotel.

Thursday, September 23, at 1:30 p. m. Automobile drive for ladies, starting from Claypool Hotel.

Thursday, September 23, at 6:30 p. m. Association dinner, Henry IV Room, Claypool Hotel. Tickets $1.50 per person.

Friday, September 24, at 12:30 p. m., luncheon for women physicians, at Neuronhurst, 1140 East Market Street.

SCIENTIFIC PROGRAM

Thursday, September 23, 1915.

8:30 a. m., Organization.

Address of President, Dr. Frank B. Wynn, Indianapolis.

GENERAL MEETING

(Auditorium, Claypool Hotel)

Thursday, 9:30 a. m.

1 Dr. Chas. P. Emerson, Indianapolis.

Subject: The Modern Conception of Nephritis.

Abstract.—The changing conception of nephritis and the importance of this in diagnosis.

The differences between the pathological and clinical classifications of diseases of the kidney.

The diagnosis of disturbances of renal function, the chemical examination of the urine, the physical examination of the patient, the history of the patient's symptoms, all are important in the diagnosis of nephritis.

Other conditions which can produce changes in the urine similar to those often found in nephritis.

Leaders in discussion: Dr. Geo. F. Butler, Kramer, Indiana; Dr. J. A. MacDonald, Indianapolis.

2. Dr. Thomas Jones, Anderson, Indiana.

Subject: The Value of the Renal Functional Test in Surgery.

Abstract.—The value, to the patient and to the surgeon, of being able to determine beforehand whether the kidney remaining after nephrectomy will do the work of two kidneys. The influence upon the kidney of obstruction in the lower urinary tract. The value of being able to determine the condition of the kidney before attempting operation.

Renal functional tests are many and varied. Renal functional capacity is estimated in one of two ways: (1) by the estimation of the excretory capacity of the kidney through quantitative estimation in the urine of certain substances such as methylene blue, indigo carmine, phenolsulphonephthalein, etc.; (2) by tests of retention through quantitative determination of the concentration of certain substances in the urine, as urea, cholesterin, etc.

Renal functional tests are of doubtful value when considered alone, and it is only in the presence of clinical symptoms that the functional test is to be relied on as an indicator of the functional powers of the kidney.

Many conditions influence the actions of the renal organs, causing a temporary increase or decrease in the elimination from the kidney, thereby rendering the results of the renal functional test misleading, and especially when considered alone. To be of any real value the test must be made repeatedly and even then to be of much diagnostic value the comparative differences in the functional output must be marked.

The phenolsulphonephthalein test is probably the most efficient of the renal functional tests. Contains many virtues which the other tests lack. The greatest value of the functional test is as an aid to the diagnosis of doubtful lesions of the kidney. The presence of a marked diminution of dye secretion on one side should be regarded as indicative of the existence of some pathological lesion. Its absence will not exclude the possibility of the existence of a lesion.

Leaders in discussion: Dr. Frank S. Crockett, Lafayette, Indiana; Dr. W. P. Garshwiler, Indianapolis.

SECTION ON MEDICINE

(Auditorium, Claypool Hotel)

Thursday, 11 a. m.

1. Dr. Paul E. Bowers, Michigan City, Indiana.

Subject: Hysteria in General Practice.

Abstract.—Definition of hysteria and difficulties encountered in the diagnosis of the same.

Confusion with epilepsy, hystero-epilepsy and beginning psychoses.

Etiology. Real and apparent causes. Sexual factors.

Outline of symptoms.

Treatment.

Brief outline of obstacles encountered.

Prejudices and wrong conceptions of this psychoneurosis.

Psychoanalysis.

Leaders in discussion: Dr. Walter F. Carver, Albion, Indiana; Dr. F. F. Hutchins, Indianapolis.

2. Dr. Max A. Bahr, Indianapolis, Indiana.

Subject: Presentation of a Case of Hysteria from the Viewpoint of the Freudian Psychology.

Abstract.—Recent researches in psychology have revealed facts which show that the various phenomena occurring within the psychic sphere are not accidental, but are definitely associated with causes in quite a similar way as in the physical world.

Hysteria is due to the operation of buried complexes or ideas which represent certain desires on the part of the patient, and a resulting conflict between these desires and an attitude of mind as the result of education, environment, etc. The symptoms are generally expressed by symbols and represent the manner in which unconscious wishes obtain gratification.

Methods employed in the technic of psychoanalysis are the association tests and dream analyses. The principle of the treatment is to overcome this mental conflict and make the patient realize the existence and influence of his unconscious and self-condemned desires. The various fundamental principles of the Freudian psychology will be demonstrated by the presentation of a case.

Leaders in discussion: Dr. Ernest H. Lindley, Bloomington, Ind.; Dr. Albert E. Sterne, Indianapolis.

SECTION ON SURGERY

(Palm Room, Claypool Hotel)

Thursday, 11 a. m.

1. Dr. W. H. Williams, Lebanon, Indiana.

Subject: Diseases of the Gall Bladder and Their Influence upon Adjacent Organs.

Abstract.—In this paper the more common diseases of the gallbladder and their influence upon other organs will be discussed, with special reference to the heart and kidneys. A brief anatomical review, with reference to some of the functions of the bile and pancreatic juices and the detrimental effect produced by abnormal chemical changes. Signs of atypical cases and the symptoms of oncoming complications. Treatment both medical and surgical, with special reference to the latter, including a new feature in operative technic.

Leaders in discussion: Dr. Murray Hadley, Indianapolis; Dr. Joseph Weinstein, Terre Haute, Ind.

2. Dr. W. H. Baker, South Bend, Indiana.

Subject: Some Considerations in Pelvic Floor Work in Women.

Abstract.—Some historic considerations.

The regional anatomy and physiology of the pelvis floor, briefly considered, as it directly affects the support of parts above it.

The pathological conditions found in pelvic floor weakness.

Prolapsus of uterus is only one of the conditions found. It is often associated with visceroptosis.

Uterosacral ligaments are lengthened in prolapsus uteri; if they were not the condition could not exist.

The symptoms and signs in pelvic floor weakness are often associated with and but a part of a general constitutional weakness.

Round ligament operations do not settle question in retroversion of uterus.

Uterosacral ligament shortening with pelvic floor repair important in prolapsus uteri.

Perineal stitches binding muscles together are very apt not to hold unless the muscular fascia is also included.

Buried perineal stitches preferable to exposed ones.

Leaders in discussion: Dr. G. Eckhart, Marion, Indiana; Dr. Goethe Link, Indianapolis.

3. Dr. H. O. Mertz, Laporte, Indiana.

Subject: Urenephrosis—Its Significance and Detection, with review of cases.

Abstract.—The significance of uronephrosis depends on its effect on the renal function, on the anatomy of the parts involved and on the retained urine, while its detection, in the early process, is principally the determination of an obstruction, as an uncomplicated stasis is always the result of an interference with the passage of urine from the kidney to the bladder.

The value of a good history is dealt with, also the necessity of the cystoscope and Roentgen ray in making the diagnosis in these cases. Pyelography is emphasized as a means of recognizing the condition early in the process, while in end pathology, as a diagnostic means, its value is limited. Cases are reported, illustrated by slides, the pathology varying from the beginning process, where constructive surgery is possible, to advanced conditions demanding destructive surgery.

Leaders in discussion: Dr. M. A. Boor, Terre Haute, Indiana; Dr. H. G. Hamer, Indianapolis.

SECTION ON EYE, EAR, NOSE AND THROAT

(Florentine Room, Parlor Floor, Claypool Hotel)

Thursday, 10:30 a. m.

1. Dr. John F. Barnhill, Chairman, Indianapolis.

Subject: The Present Position of Oto-Laryngology in Medicine and Surgery.

2. DR. FRED M. RUBY, Union City.

Subject: The Use and Misuse of Tinted Lenses in Refraction.

Abstract.—The enormous increase in the number of tinted lenses used, together with the wide range of tints, and the claims made for each, demands our attention.

The cause of photophobia of mild degree and its influence on refractive errors, in which we have to consider a wide field, from the glaring white pavement to the continually increasing brilliance of our artificial illuminating devices, whether used for commercial or domestic lighting.

Brief review of the theory of the absorption of the irritating rays by certain makes of glass (case of Mrs. F. and the pink lens).

Review of six assorted cases.

Conclusions:—That the tinted lens fills a long-felt want and as a result has been received by refractionists with just a little too great an ovation for their own or the patient's good.

Leaders in discussion: Dr. John R. Newcomb, Indianapolis; Dr. Adam B. Knapp, Vincennes.

Thursday Afternoon Meeting 2 p. m.

1. DR. MARCUS RAVDIN, Evansville.

Subject: The Tonsil.

Abstract.—Various theories concerning the function of the tonsils.

The relation of the tonsil to systemic and focal infection, especially tuberculosis, arthritis, cardiovascular and renal infections. (Hypertension acute and chronic nephritis.)

Can we demonstrate the route of infection from the tonsil to the lungs, joints, etc.?

Indications for the removal of tonsils and choice of method. Tonsillectomy or tonsillotomy, which and when?

Preparation of patients. The anesthetic. Accidents during the operation. Postoperative care. Possible complications. Results of the operation. The improvement of general conditions for which the tonsillectomy was undertaken. The voice after tonsil operations in the young and adult. Personal observations.

Conclusions.

Leaders in discussion: Dr. C. Norman Howard, Warsaw; Dr. James H. Black, Lebanon.

2. DR. CASEY A. WOOD, Chicago. (Guest paper.)

Subject: Some Recent Operative Procedures for the Relief and Cure of Chronic Glaucoma.

Abstract.—Reference to some of the earlier operative measures for the relief of chronic glaucoma. The trephine operation of Elliott and the sclerectomy operation of LaGrange. The sclerocorneal seton, or "thread operation," as devised by the author.

Leaders in discussion: Dr. Albert E. Bulson, Jr., Fort Wayne; Dr. Thomas C. Hood, Indianapolis.

3. DR. EDWIN J. LENT, South Bend.

Subject: Chronic Suppurative Mastoiditis, Accompanied by Intracranial Pressure. Case Report.

Abstract.—Chronic middle ear suppuration is of comparatively frequent occurrence. Caries and cholesteatomata of antrum and attic are quite frequent sequelae. Persistent fetid discharge which does not subside after thorough local means have been persistently followed for a reasonable length of time demands radical surgical interference. Intracranial complications occur in a limited number of cases, fortunately. The method of transmission from cavum tympanum inside the skull is necessarily largely speculative, probably due to either one or all of the following conditions: (a) direct continuity of tissue; (b) blood and lymph stream; (c) sheath of nerve and blood vessels. Much difficulty is encountered in making differential diagnosis of intracranial complications.

Report of case of large cerebral cyst complicating chronic middle ear suppuration in which a tentative diagnosis of intracranial abscess had been made. Radical mastoid operation, skull trepanned over rolandic fissure. Large serous cyst in arm and leg region found. Drainage and recovery.

Leaders in discussion: Dr. John F. Barnhill, Indianapolis; Dr. Joseph Maurer, Marion.

4. DR. WALTER N. CULMER, Bloomington.

Subject: The Defenses of the Upper Respiratory Tract, and Their Preservation.

Abstract.—Each function of the upper respiratory tract maintains its distinctive protective elements. The successful operation of one function is so dependent on the proper performance of the other, that any break in this one function necessarily defeats the purpose for which both are maintained.

The natural defenses of this region then are component parts of each function of the breathway, and since the physiological demands of this part of the body are supplied primarily by the respiratory, olfactory and reflex acts, together with the part played by Waldeyer's ring, a careful study of each one of these will reveal the natural defenses here provided.

The conditions that impair or prevent the successful operations of each natural process are, faulty development, congenital lesions and results of environment.

The means that we have for preserving the natural defenses of the upper respiratory tract, and the correction of their defects are, educational, local and constitutional measures, both medical and surgical, and the cooperation of legal means.

Leaders in discussion: Dr. Geo. W. Spohn, Elkhart; Dr. Paul B. Coble, Indianapolis.

SCIENTIFIC DEMONSTRATIONS

(INDIANA UNIVERSITY SCHOOL OF MEDICINE, SENATE AVENUE, OPPOSITE THE CAPITOL)

Thursday, 2 to 5 p. m.

GROUP A

(a) Demonstration of the technic of taking blood for the Wassermann reaction, and the method of its preparation for the test.
DR. HARRY LANGDON, Indianapolis.

(b) 1. Demonstration of motile Spirochete by dark field illumination.
2. Demonstration of finished Wassermann test in negative and positive blood.
DR. JOHN THRASHER, Indianapolis.

(c) Frozen section method for immediate pathologic diagnosis.
DR. H. R. ALBURGER, Indianapolis.

(d) Some cultures of bacteria found in the circulating blood.
DRS. ALBURGER and EDWARDS, Indianapolis.

GROUP B

(a) Demonstration covering diseases of the breast. Drawings, gross specimens, microscopic sections, and photographs illustrating diseases of the breast.
Dr. W. D. Gatch, Indianapolis.

(b) Microscopic demonstration of stained motile endamebae from pyorrhea alveolaris.
Dr. Arthur Walters, Indianapolis.

(c) An exhibit showing method of physiologically testing pituitary extract.
Dr. C. E. Eckler, Indianapolis.

GROUP C

A series of roentgen-ray plates illustrating the following conditions:

(a) Carcinoma of the esophagus; cardia spasm; carcinoma of the stomach, early and inoperable stage; benign pyloric obstruction; gastric ulcer; gallstones; diseased appendix; cecum mobile; colonic stasis; kink and adhesion of transverse colon; carcinoma of transverse colon; carcinoma of sigmoid.
Dr. A. M. Cole, Indianapolis.

(b) Diseases of the chest.
Dr. E. O. Lindenmuth, Indianapolis.

(c) Radiodontia; what it means.
Dr. H. R. Raper, Indianapolis.

GROUP D

(a) Cerebral embolism, the method of production. Demonstrated by gross specimens, charts and photographs.
Dr. F. C. Potter, Indianapolis.

(b) 1. Examination of brain for Negri Bodies and other pathologic evidences of hydrophobia. Methods of demonstration.
2. The Antiformin method of examining tuberculous sputum for tubercle bacilli.
Dr. William Shimer, Indianapolis.

(c) Microscopic sections demonstrating the histologic changes in testes of vasectomized animals.
Dr. B. D. Meyers, Bloomington, Indiana.

GROUP E

Demonstration of the technic of blood-transfusion, using dogs.

(a) Lindeman method, using syringes.
Dr. J. V. Reed, Indianapolis.

(b) Kimpton method, using the Kimpton tubes.
Drs. Ulrich and Johnstone, Indianapolis.

(c) Citrate method as proposed by Lewisohn.
Drs. Day and Marsh, Indianapolis.

(d) Hemolysis and agglutinin test of blood to determine safety of blood transfusion.
Dr. Bernhard Erdman, Indianapolis.

GENERAL MEETING

(Auditorium, Claypool Hotel)

Thursday, 8 p. m.

1. Dr. C. C. Bass, New Orleans, La.
Subject: The Relation of Endamebae to Alveolar-Dental Pyorrhea.

2. Dr. W. J. Mayo, Rochester, Minn.
Subject: The Relation of the Spleen to Certain Anemias.

3. Dr. E. C. Rosenow, Rochester, Minn.
Subject: The Pathogenesis of Experimental and Spontaneous Appendicitis, Ulcer of the Stomach and Duodenum and Cholecystitis.

SECTION ON MEDICINE

(Auditorium, Claypool Hotel)

Friday, 9 a. m.

1. Dr. Chas. R. Bird, Greensburg, Indiana.
Subject: Diagnostic Routine in General Practice.

Abstract.—Internal medicine the most important specialty. Adopting routine measures which place medicine above a trade in competition with certain sects and cults. The responsibility. The opportunity. Channels of disease expression, e. g. Headache as a presenting symptom. So-called "stomach trouble" usually a symptom, there being but two diseases of the stomach. Anemia, its character and possible origin, the hemoglobinometer.

Heart murmurs not heart disease. Working basis in heart disease. The importance of interpreting disease in the light of clinical history. Albumin and tube casts, in chronic nephritis, chemical or qualitative analysis has no part.

The minimum requirement of routine measures every patient has a right to expect; an appeal for their adoption, to remove the indictment that we take the line of least resistance, and when nature ceases to float the patient in our direction, we refer him to a painstaking diagnostician.

Leaders in discussion: Dr. John G. Kinneman, Goodland, Ind.; Dr. S. E. Earp, Indianapolis.

2. Dr. Joseph M. Barry, Indianapolis.
Dr. Jane M. Ketcham, Indianapolis.
Subject: Benzol in the Treatment of Leukemia.

Abstract.—Patient, female, Hungarian, age 29, was first seen at Bobbs dispensary, in conjunction with Dr. Barry, on July 18, 1914. Personal and family history were negative. No lues, no tuberculosis, blood Wassermann negative.

Present complaint, rapidly growing tumor in abdomen, first noticed six weeks before admission.

Examination. Tumor completely fills left abdomen, rests on crest of ilium and extends to two inches beyond the mid line. Splenic notch is plainly felt. Blood count gives white cells 314,000. Differential count shows myelocytes 44.5 per cent., of which 5 per cent. are eosinophil myelocytes.

Treatment: Patient was taken to the Robert W. Long Hospital and benzol treatment instituted. The highest white count was 450,000, September 3. Benzol was discontinued on October 28 when the white count was 31,000. The myelocytes disappeared in December. On January 11, 1915, the white count was 7,800. Red count, 5,600,000, since which time the report has been practically without change. The patient is nearing the end of a pregnancy and seems to be in perfect health.

Leaders in discussion: Dr. C. S. Bond, Richmond, Ind.; Dr. Chas. L. Seitz, Evansville, Ind.

3. Dr. Allen Hamilton, Fort Wayne, Ind.
Subject: The Spleen in Relation to Anemic Diseases.

Abstract.—Function of the spleen in regard to hemolysis and iron metabolism. Symptoms of hemolysis. Types of anemic diseases in which the spleen is in-

volved—Gaucher's, Banti's, splenomegalic cirrhosis; those in which hemolysis is more marked—hemolytic icterus, congenital and acquired, pernicious anemia.

The relation of the different types to each other. Observations on splenectomy.

Leaders in discussion: Dr. H. K. Carey, Bedford, Ind.; Dr. Virgil R. Moon, Indianapolis.

4. Dr. A. C. Kimberlin, Indianapolis.

Subject: Some Points in the Early Physical Diagnosis of Pulmonary Tuberculosis.

Abstract.—The early diagnosis of pulmonary tuberculosis entails a great responsibility on the family physician. Delayed or mistaken diagnosis. Anatomical regions in the chest where tuberculosis is most frequently and easily recognized. Position of patient during examination. Importance of knowing the acoustic properties of the normal chest. Value of whispered voice sounds. Mode of percussion.

Leaders in discussion: Dr. Fred A. Tucker, Noblesville, Ind.; Dr. Alfred Henry, Indianapolis.

SECTION ON SURGERY

(Palm Room, Claypool Hotel)

Friday, 9 a. m.

1. Dr. B. P. Weaver, Fort Wayne, Ind.

Subject: Some Surgical Disorders of the Upper End of the Femur.

Abstract.—Development of study of diseases of bones and joints has not kept pace with modern progressive medicine. Results of Ely's laboratory study of 120 specimens summarized and his conclusions given. In all bone and joint diseases, active part is taken by (1) the two kinds of marrow, (2) the synovia, and (3) the inner layer of the periosteum, cartilage and ligament remaining but passive structures. Various diseases show predilection for certain of these structures, and some, as tuberculosis and pus infections, may involve all three.

Paper takes up only three or four subjects: (1) tuberculosis of the hip, with a report of case and illustrated by skiagrams; (2) hypertrophic osteoarthritis of the hip, with illustration by both skiagram and specimen; (3) malignancy, in particular metastatic carcinoma of the femoral neck, with skiagram and specimen of case. Lastly, two points mentioned in regard to fractures of the femur, namely, one as to diagnostic skiagraphy and the other concerning a point of treatment.

Leaders in discussion: Dr. George R. Andrews, Muncie, Ind.; Dr. J. H. Oliver, Indianapolis.

2 Dr. Joseph R. Eastman, Indianapolis, Ind.

Subject: The Surgical Anatomy of Cleft Palate.

Abstract.—An understanding of the anatomy of the palate is more important than manual skill in determining results. The conservation of the blood supply of paramount importance. Of scarcely less concern is the protection of nerves and the avoidance of injury to muscles. Manner of elevating flaps without injury to vessels, nerves or muscles. The folly of making long, paralyzing incisions and attempting to unite ischemic devitalized flaps. Mobilizing flaps by division of the palatal aponeurosis.

Leaders in discussion: Dr. B. P. Weaver, Fort Wayne, Ind.; Dr. David Ross, Indianapolis.

3. Dr. W. D. Gatch, Indianapolis, Ind.

Subject: Surgical Treatment of Chronic Empyema of the Thorax and of Pulmonary Tuberculosis.

Abstract.—A brief account of the anatomy and physiology of the human thorax, developing some general principles to be observed in thoracic surgery. The formation and importance of scar tissue in the thorax. The nature and extent of the sinus tract in an old empyema. Operations for the relief of old empyema. Control of hemorrhage. The use in these cases of any apparatus for artificial aeration of the lungs unnecessary. Importance of performing the more radical operations in several stages. Foreign bodies in the thorax. The prevention of chronic empyema. Illustrative cases.

The conditions present in pulmonary tuberculosis contrasted with those present in old empyema. Class of cases amenable to surgical treatment. Indications and contraindications. The technic of the operation. Results.

Leaders in discussion: Dr. Kennon Dunham, Cincinnati, Ohio; Dr. Albert M. Cole, Indianapolis.

4. Dr. James A. Work, Jr., Elkhart, Ind.

Subject: Small Cysts of the Ovary.

Abstract.—Oophorectomies still being done to relieve dysmenorrhea and "pain in the ovaries."

Inquiry into what constitutes a physiologic and what a pathologic cyst.

Ovarian cysts are frequently due to tuberculous pelvic disease. All are probably due to some degree of pelvic inflammation.

An insignificant looking cyst may be potentially malignant.

Per contra, much normal and valuable ovarian tissue is ruthlessly sacrificed, because at laparotomy, a physiologic cyst is found.

Careful diagnosis before operation and accurate discernment at operation.

Leaders in discussion: Dr. A. M. Hayden, Evansville, Ind.; Dr. T. B. Noble, Indianapolis.

SECTION ON EYE, EAR, NOSE AND THROAT

(Florentine Room, Parlor Floor, Claypool Hotel)

Friday, 9 a. m.

1. Dr. Louis D. Brose, Evansville.

Subject: Vertigo.

Abstract.—Vertigo is a symptom. A close relationship exists between vertigo and disturbances of equilibrium. Afferent impulses transmitted from the inner ear, the eye and through the kinesthetic sense are harmonized subconsciously in the brain and permits correct interpretation of our bodily relation in space. As soon as disharmony is perceived or when the impulses are inadequate for a correct interpretation of our bodily relation, a fear of instability arises which may be termed vertigo.

Aural vertigo may point to a lesion in the external auditory meatus, to lesion in the middle or internal ear. In labyrinthine disease, we often find, in addition to hearing impairment, disturbed equilibration and nystagmus. Ocular vertigo may be due both to intra- and extra-ocular cause. Of the extra-ocular causes diplopia is most common, though vertigo may occur when vision is alone performed by the paralyzed eye. Characteristic of all ocular vertigoes, is their

disappearance as soon as the eyes are closed or the patient has learned to correct his faulty projection by altering the position of his head. Vertigo the result of disharmony through falsification of impulses transmitted through the kinesthetic sense, in contradistinction to that of ocular origin, become exaggerated as a rule by closure of the eyes. It is quite generally accepted that vertigo is always present when the basil part of the cerebellum more especially its posterior parts, are diseased. Such vertigo is usually absent during the quiet horizontal position of the body, but becomes accentuated as soon as the patient sits up or moves about.

Equilibrium disturbances, cerebellar in origin, differ from those of vestibular origin in that the strict relationship between the character and direction of the elicited nystagmus and the direction of the disturbances in equilibrium are lost, a feature alike common to hysterical and neurasthenic disorder.

Central vertigo results from circulatory disturbance, from toxins and from pressure. Vertigo appearing in diseases of the cerebrum is associated with more or less complete loss of consciousness. Change in position from lying down to sitting up aggravates the vertigo. In neurasthenic states, dizziness is a frequent symptom. It may not be profound but very obstinate and almost the last of the manifest symptoms to get well.

Many cases of cerebral concussion complain of vertigo, and in the diagnosis of traumatic neurosis, nystagmus is of importance because the disturbances in equilibrium do not follow the rule of the normal ear, or else greatly exaggerate this rule.

Leaders in discussion: Dr. Geo. F. Keiper, Lafayette; Dr. Harry C. Parker, Indianapolis.

2. Dr. Wm. S. Tomlin, Indianapolis.

Subject: Chronic Suppurative Ethmoiditis; Diagnosis and Treatment.

Abstract.—This is one of the most common causes of chronic suppurative discharge from the nose.

The diagnosis to be useful must develop the extent of the pathologic process, throw light on its origin and causes of continuation together with complications. Most important of these are abnormalities which interfere with the ventilation and drainage of the nose and sinuses.

The treatment is essentially surgical and broadly includes the removal of all tissues beyond repair, the opening up of associated pustular regions which would reinfect, and providing as nearly aseptic after care as possible. Ultimate recovery is frequently delayed and final comfort is usually comparative and depends, it must not be forgotten, partly on tissues left undisturbed.

Leaders in discussion: Dr. Joseph D. Heitger, Bedford; Dr. Wm. A. Hager, South Bend.

3. Dr. Kent K. Wheelock, Fort Wayne, Ind.

Subject: The Blood Clot Dressing in Simple Mastoid Operation.

Abstract.—A surgical operation which is safe and simple must always take the place of one which is safe and complicated. Complications may arise in the healing process and the more prolonged the healing process is the greater are the complications.

If a wound can be converted into a simple incision and made to heal by primary union it is infinitely better surgery than it would be to deliberately make an open wound to be closed by the slow process of granulation.

Thirteen consecutive cases of simple mastoid abscess with an average hospital care of seven days. The healed wound presents a simple line without depression. It has the advantage that the operation may be done at home where the hospital is not accessible: and the after-care may be left in the hands of the family physician. At times the operation at home may be of great economic importance. In at least two cases the destructive process of the abscess had laid bare the dura, yet the recovery was speedy and uneventful.

In delicate and nervous children where the dressing by packing is done great suffering is necessarily seen, while in the blood clot dressing and closing the wound as in a simple skin incision the subsequent dressings are without pain. This method is an old one, and has been used by Dr. John Clarence Blake of Boston, for twenty-five years, and deserves a fair trial at the hands of the profession. While every case may not result in healing by primary union, yet we are no worse off if the wound becomes infected and we are compelled to clean out the clot and pack in the usual way than we are when we pack the wound at once and secure closure by granulation.

Leaders in discussion: Dr. E. deWolf Wales, Indianapolis; Dr. Luther Z. Breaks, Terre Haute.

4. Dr. Wm. F. Clevenger, Indianapolis.

Subject: Deviations of the Nasal Septum and the Submucous Operation.

Abstract.—Nasal breathing physiologically a necessity. Neglected adenoid and tonsil hypertrophy in early life are responsible for septal deflections, as arch of superior maxillary bone is changed from the normal in the absence of nasal breathing. No septum should be operated under age of puberty, but after tonsil and adenoid mass has been removed child should be placed under care of a competent orthodontist for correction of maxillary deformity. Sinus infections due to deficient drainage. Most cases result directly from a septum varying from median line, which produces, by pressure, hypertrophy of the adjacent tissues thus causing obstruction to natural drainage. No septum should be operated in syphilitic or hemophiliac. Little danger accompanying procedure if work is done in a hospital and proper care taken to avoid infection. The per cent. of questionable results are more or less in proportion to the lack of understanding on the part of the operator. Operation usually done under local anesthesia and with total absence of pain. Many neurological problems traceable to middle turbinal pressure from septal deviations.

Leaders in discussion: Dr. Charles R. Jackson, Orthodontist, Indianapolis; Dr. James McCall, Jr., Terre Haute.

5. Dr. Walter J. Leach, New Albany, Ind.

Subject: Increased Blood Pressure.

Abstract.—The ophthalmologist is frequently the first to discover the ill effects of increased vascular tension as manifested by retinal hemorrhages and retinal inflammation which accompany various forms of nephritis which escape the attention of the general practitioner until far advanced. The otologist often discovers it in his search for tinnitus, and in lowered or confused hearing. The rhinologist often finds it a cause of obstinate nasal hemorrhage and engorged turbinates as well as a disturbing element in many cases

of acute catarrh. The laryngologist finds it prominent in the etiology of cough without distinct inflammatory symptoms in the respiratory tract. The specific causes of increased vascular tension seems to be toxemia; cardiac hypertrophy and vascular sclerosis may be secondary causes. Confusion often arises as to which is the cause and which the effect. The causative toxins may be exogenous or endogenous. Some of the results of high blood pressure are slowed circulation, poor elimination, hypertrophy and finally dilatation of the cardiovascular system, which causes a disturbance of relation between intra and extra-vascular pressure. This high pressure is more seriously damaging to delicate organs of special sense.

High pressure usually can be remedied except in cases of nephritis. Elimination is of first importance, always looking to the cause for a suggestion as to the remedy. To limit to a low degree nitrogenous food is also of great importance.

Leaders in discussion: Dr. Lafayette Page, Indianapolis; Dr. John E. P. Holland, Bloomington.

6. Drs. Wm. F. Hughes and Frederick C. Heath, Indianapolis.

Subject: Presentation of Interesting Eye Cases.

Abstract.—(1) Zonular opacity of the cornea. (2) Hereditary optic atrophy with a history of blindness in five generations. (3) Interesting and rare ophthalmoscopic cases.

GENERAL MEETING

(Auditorium, Claypool Hotel)

Friday, 2 p. m.

Symposium on Obstetrical Subjects

1. Dr. Charles E. Ferguson, Indianapolis.

Subject: The Toxemias of Pregnancy.

Abstract.—Recent experiments have thrown some light on the obscure origin of the toxemias of pregnancy. Fetal elements are autolysized with an excess of leucin. Leucin causes the primary lesion in the liver. Kidney changes in eclampsia are late and are the result of an excess of autolytic products due to failure of hepatic function.

Uremic convulsions due to nephritis are not always to be differentiated from eclampsia. The importance of the early discovery of albuminuric retinitis during pregnancy has not been sufficiently emphasized. These cases should be aborted at once. Conservative treatment of convulsions is fatal where the convulsions are due to primary lesions in the kidney.

2. Dr. L. Burckhardt, Indianapolis.

Subject: Analgesia in Labor.

Abstract.—A short review of the methods employed during the past ten years. Consideration of anesthesia by inhalation. Use of opiates or local applications. Amnesia or the so-called twilight sleep. The need of individualization in the use of one or the other methods.

3. Dr. G. B. Jackson, Indianapolis.

Subject: The Cesarean Section in Conservative Obstetrics.

Abstract.—It is our intention to consider only the relative field; the field occupied by the so-called "border line cases." What are "border line cases"? What constitutes the competitive field of this operation?

I. Mainly obstruction to labor for:
   1. Relative disproportion between the size of birth canal and fetus.
   2. Abnormal presentations.
   3. Abnormalities of the birth canal other than disproportions of size: i. e., neoplasms, malformations (double vagina, atresia), etc.
   4. Absolutely unfavorable presentations:
      (*a*) Impacted face (mento post).
      (*b*) Shoulder.

II. Placenta previa or "concealed hemorrhage" (abruptio placentae).

III. Toxemias:
   (*a*) Eclampsia.
   (*b*) Hyperthyroidism.

IV. Rupture or threatened rupture of the uterus.

V. Other emergency conditions: e. g., prolapse of cord, heart disease, etc.

4. Dr. H. F. Beckman, Indianapolis.

Subject: The Effect of Toxemia of Pregnancy Upon the New-Born.

Abstract.—Fetal mortality of 35 to 50 per cent. is not caused directly by the toxemia, but by (1) prematurity; (2) asphyxia; (3) drugs given to the mother; (4) injuries; (5) toxemia directly, 6.5 per cent. The toxemia may be acute or chronic.

In the acute form the child early struggles violently, and then becomes rather quiet and unresisting; the heart beat (at first rapid) becomes slow and faint and disappears. This, however, does not establish the death of the child, as upon birth this child can very often be revived by the established methods of resuscitation.

The living child will be plump and well developed for the period of gestation, and usually survives. The child that perishes, dies, first, from the depressing effect of the toxins upon the vital centers; second, destructive effect of toxins on the integrity of the liver, kidneys and cerebellar cortex; third, shock due to maternal convulsions; fourth, asphyxia, due to placental separation.

By the chronic form of toxemia, let us understand the effect upon the system produced by previous measles, scarlet fever, diphtheria, pneumonia, typhoid, malaria, tuberculosis, syphilis, and conditions not commonly thought of, namely, mechanical obstruction of nasal passages; accessory nasal sinus infection; carious teeth; pyorrhea; anemias due to improper food and insufficient food; intestinal auto-intoxication; disturbed function of the ductless glands; endometrial changes due to cervical lacerations and uterine displacements.

To deal with these collectively, let us accept the group of symptoms commonly accepted as being indicative of the auto-toxic state. The effect of this condition upon a conception will be sclerosis of the blood vessels of the decidua and placenta, making them brittle or thrombotic, causing (1) early placental hemorrhage and white infarcts, which may separate the ovum completely, and produce an abortion, or partially and thus mechanically interfere with the fetal circulation; (2) later producing premature detachment of the placenta at labor, or (3) placental autolysis with eclampsia; (4) by the accumulation of toxins in the blood, the villi may become so altered as to be unfit to carry on the function of nourishing the child, or (5) the toxins passing over to the child, impair the healthy development of the same.

Leaders in discussion: Dr. H. A. Duemling, Fort Wayne; Dr. C. N. Combs, Terre Haute.

REPORT OF TREASURER

David W. Stevenson, Treasurer, in account with the Indiana State Medical Association.

DEBIT

To balance on hand Sept. 1, 1914		$3,825.85
To cash from Secretary		5,415.00
Total		$9,240.85

CREDIT

By cash to The Journal		$1,961.25
By cash to the Medical Defense Fund		1,961.25
By cash to Councilor E. E. Morgan	$5.40	
By cash to Councilor G. W. H. Kemper	3.25	
By cash to Councilor F. A. Tucker	8.60	
By cash to Councilor G. G. Eckhart	4.00	
By cash to Councilor J. G. Jones	9.25	
		30.50
By cash to Geo. F. Keiper		78.60
By cash to printers—		
Terre Haute Printing Co	$ 2.75	
Viquesney Printing Co	62.50	
R. F. Markley	2.10	
Viquesney Printing Co	18.75	
Viquesney Printing Co	145.75	
Moore Langen Printing Co	2.75	
Terre Haute Printing Co	8.75	
Cleary & Bailey	114.42	
American Medical Association	185.13	
		542.90
By cash to stenographers—		
F. E. Dillan	$100.00	
M. Scott-Hill	102.70	
Stenographer's expenses	13.00	
Edith Renking	60.00	
Edna Binglow	64.55	
		340.25
By cash to Chas. N. Combs, Secretary, honorarium	$300.00	
By cash to Chas. N. Combs, Secretary, expenses	52.77	
For Dr. Wynn's Committee	110.80	
		463.57
By cash to Committee on Necrology		10.00
By cash to A. M. A. Committee on Reports and Programs		27.00
Total		$5,415.32
To balance on hand		3,825.53
Grand total		$9,240.85

Respectfully submitted, Sept. 4, 1915.
(Signed) David W. Stevenson.

REPORT OF SECRETARY

House of Delegates, Indiana State Medical Association.

Gentlemen:—For the nine months ending Sept. 1, 1915, the paid-up membership of the Association is 2,577, an increase of forty-seven over the corresponding time last year. The membership on September 1 of each year during the present secretary's incumbency is as follows:

Sept. 1, 1911	2,342
Sept. 1, 1912	2,387
Sept. 1, 1913	2,480
Sept. 1, 1914	2,530

While the foregoing number is still larger than the entire membership for last year, it is possible that there will still be a few more who will pay up before the end of the year, as there are at present 159 delinquents.

Last year there were paid-up memberships sent in from all but two of the ninety-two counties. This year, with the membership sent in from the Jasper-Newton County Society, every county except Brown is represented. Thus to judge from the secretary's cards, there are organizations in all but one of the ninety-two counties. As a matter of fact, however, the organization in many counties begins and ends in a meeting once a year for the election of officers, mostly to get a secretary who will collect the dues. A most urgent need of the Association is apparently to give these skeleton organizations flesh and blood and vital pulsations.

The councilors' reports as compared to last year show fewer meetings held, fewer papers read and fewer cases reported. A large representation at the coming Indianapolis session from these counties (and you all know who you are without giving any names) ought to generate a new impulse to make amends for the present record.

The entire corps of county secretaries has been unusually prompt and accurate in sending in the membership lists this year. If we were to organize in this state as they do in some other states a "100 per cent. club" (counties enrolling 100 per cent. of their membership before the annual session) the following counties would be in good standing this year: Adams, Allen, Boone, Carroll, Clinton, Crawford, Decatur, Delaware, DuBois, Elkhart, Floyd, Franklin, Fulton, Gibson, Grant, Hancock, Hamilton, Hendricks, Henry, Howard, Jasper-Newton, Jefferson, Jennings, Johnson, Knox, Kosciusko, Lagrange, Madison, Marion, Marshall, Miami, Monroe, Montgomery, Parke-Vermilion, Pulaski, Putnam, Randolph, Ripley, Scott, Starke, Steuben, Switzerland, Union, Vanderburg, Vigo, Wabash, Washington, Wayne, Wells, Whitley.

The detailed and statistical report for the entire year will be presented in the January number of The Journal. Charles N. Combs, Secretary.

REPORT OF COMMITTEE ON MEDICAL DEFENSE

House of Delegates, Indiana State Medical Association.

Gentlemen:—This has been an active year in defense. Attention is called to an increasing number of cases in different parts of the state; some trials have been held, some dismissals obtained, and preparations for contest made in the cases not disposed of.

The committee has had under consideration since organization, about thirty cases in which defense was proper. Of these, ten have been successfully disposed of at expenses ranging from zero to $145 per case, or an average of $49.27½ each.

Two are pending on appeal, with everything done possible to aid the members to obtain reversals, costing respectively $465 and $274 each.

Several have not progressed beyond the stage of threat, and are not filed as suits, yet we are prepared for them when they shall come, if they do.

In one case a hung jury left us where we started, at an expense of $161.50, with follow-up arrangements all made.

In a number we have paid the preliminary retainers, and made the necessary investigations, while in two or three instances retainers were not paid, but expenditures in the cause are authorized. Such matters

COUNCILORS' REPORTS

FIRST DISTRICT

Counties	No. in County Society	Non-Eligible Members	No. of Society Meetings	Attendance	No. of Scientific Papers	No. of Case Reports	No. of Visits of Councilor
Pike	21	30	9	5	13	11	..
Gibson (no report)	..	..	..	..	..	..	..
Posey	21	4	4	12	4	2	..
Vanderburg (no report)	..	..	..	..	..	..	..
Warrick	19	12	5	6	0	5	..
Spencer	21	13	6	7	..	..	..
Perry	11	5	2	5	0	4	..
Totals	93	64	26	35	17	22	..

SECOND DISTRICT

Sullivan	34	3	12	16	16	3	1
Knox	45	12	12	21	30	15	3
Daviess	27	5	10	10	9	5	..
Martin (no report)	..	..	..	..	..	..	..
Monroe (no report)	..	..	..	..	..	..	1
Owen	18	..	10	5	..	..	..
Greene	24	7	6	14	5	4	..
Totals	148	27	50	66	60	27	5

THIRD DISTRICT

Clark	21	10	3	5	0	0	..
Crawford (no report)	..	..	..	..	..	..	..
Dubois (no report)	..	..	..	..	..	..	..
Lawrence	26	5	6	9	4	6	..
Orange	20	4	4	6	0	4	..
Floyd	27	5	7	10	3	5	..
Harrison (no report)	..	..	..	..	..	..	..
Scott	4	9	0	..	..	..	..
Washington (no report)	..	..	..	..	..	..	..
Totals	98	33	20	30	7	15	..

FOURTH DISTRICT

Decatur	17	9	15	8	10	5	..
Bartholomew	23	15	9	10	10	..	..
Jackson	25	..	..	..	..	..	..
Jennings	19	0	7	9	4	18	7
Jefferson	22	2	16	9	11	6	1
Ripley	12	12	3	5	4	..	..
Dearborn-Ohio	26	6	8	10	6	2	..
Switzerland	9	3	1	..	..	..	..
Totals	153	47	59	51	45	31	8

FIFTH DISTRICT

Vigo	88	20	27	20	22	5	31
Parke - Vermillion (no report)	..	..	..	..	..	..	2
Clay (no report)	..	..	..	..	..	..	..
Putnam	21	10	5	14	4	..	1
Totals	109	30	32	34	26	5	34

SIXTH DISTRICT

Hancock	19	12	8	14	12	30	..
Henry	28	29	6	12	5	6	6
Fayette	14	3	2	6	1	5	1
Franklin (no report)	..	..	..	..	..	..	..
Rush	23	2	0	0	0	0	1
Union	6	..	6	5	12	6	..
Shelby (no report)	..	..	..	..	..	..	..
Wayne	52	..	14	17	20	18	1
Totals	142	46	36	54	50	65	9

SEVENTH DISTRICT

Counties	No. in County Society	Non-Eligible Members	No. of Society Meetings	Attendance	No. of Scientific Papers	No. of Case Reports	No. of Visits of Councilor
Hendricks	29	2	12	12	6	6	1
Johnson	14	26	12	8	12	6	1
Marion	303	..	32	87	36	52	10
Morgan (no report)	..	..	..	..	..	..	..
Totals	346	28	56	107	54	64	12

EIGHTH DISTRICT

Blackford	19	2	3	5	0	1	..
Delaware	53	13	13	25	12	8	..
Jay	19	7	9	8	9	13	..
Madison	53	55	9	19	11	18	1
Randolph	28	..	12	10	24	18	..
Totals	172	77	46	67	56	58	1

TENTH DISTRICT

Lake	90	14	12	28	16	17	1
Porter	24	26	16	11	18	4	1
Jasper	9	1	12	8	36	3	..
Laporte	51	4	10	20	15	4	1
Benton	15	..	1	10	1	0	..
Totals	189	45	51	77	86	28	3

ELEVENTH DISTRICT

White	10	20	0	0	0	0	..
Carroll	27	7	8	14	6	4	1
Cass	45	5	26	11	27	62	..
Miami	25	9	11	14	14	8	..
Wabash (no report)	..	..	..	..	..	..	2
Grant	42	12	12	21	10	15	12
Huntington	37	6	12	11	10	8	1
Totals	186	59	69	71	67	97	16

TWELFTH DISTRICT

Lagrange	20	..	7	12	14	16	1
Noble	31	2	3	20	8	2	..
Whitley	16	4	8	5	8	21	1
Wells	27	3	14	9	14	27	..
Adams	17	5	8	9	10	2	..
Allen	95	10	40	20	32	20	30
DeKalb	20	12	3	9	2	6	..
Steuben	17	3	11	7	14	35	..
Totals	243	39	94	91	102	129	32

THIRTEENTH DISTRICT

St. Joseph	65	..	28	17	22	32	..
Pulaski	4	10	1	5	0	0	..
Fulton	12	13	10	8	5	5	..
Marshall	23	4	12	11	16	2	..
Elkhart	57	10	10	22	15	3	..
Kosclusko	22	11	5	10	5	29	..
Starke (no report)	..	..	..	..	..	..	..
Totals	183	48	66	73	63	71	..

No report from Ninth District.

receive the attention of our general counsel, and in every instance the judgment and wishes of the defending member are consulted.

There are a few cases in which insured members have been sued and in which cooperation has been had with their companies quite satisfactorily.

While some cases cost more, the average expense per case is running at about $100, for which the present assessment of 75 cents seems quite adequate, at least for another year.

The committee desires again to express its gratitude to Mr. Cavins, our attorney, for his painstaking consecration and efficient service.

FINANCIAL STATEMENT

Balance in fund August, 1914	$3,984.35
Received from Dr. D. W. Stevenson, the association's treasurer	1,961.25
Interest on savings deposit	81.49
	$6,027.09

EXPENDITURES

Compensation of general counsel, regular	$ 360.00	
Bond of chairman	15.00	
Taxes of 1914	71.40	
Printing of legal blanks	12.00	
Bowers case	50.00	
Christie case	149.00	
Loring case	50.00	
Baylor case	50.00	
House case	120.00	
Cook & Custer case	367.79	
Ward & Thralls case	28.90	
Ward case	25.00	
Squires case	85.00	
Shoemaker case	25.50	
	$1,409.59	$1,409.59
Balance in fund August, 1915		$4,617.50
		$6,027.09

Respectfully submitted,
Joseph Rilus Eastman, Chairman,
Albert C. Kimberlin,
Albert E. Sterne,
Committee on Medical Defense.

REPORT OF COMMITTEE ON NECROLOGY

House of Delegates, Indiana State Medical Association.

Gentlemen:—From Aug. 1, 1914, to July 31, 1915, 114 of the physicians of Indiana have passed away by death. Their names and date of death have been properly recorded in The Journal of the Indiana State Medical Association.

Respectfully submitted,
G. W. H. Kemper,
Chairman Committee on Necrology.

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

House of Delegates, Indiana State Medical Association.

Gentlemen:—Your Committee on Health and Public Instruction desires to present the following report:

PUBLIC INSTRUCTION

Laws are important principally to supply machinery with which to carry educational measures to the people, but before proper legislation is now procured and ofttimes in advance of it, the education of the public has occurred and the laws are unnecessary.

The trend of modern medicine is becoming more and more toward the education of the people and it might be wise for this Association to consider becoming the recognized leading educational agency. If it could enlarge its organization whereby it could permit the affiliation with institutions and societies such as the State Board of Health, State Board of Education, the Indiana Health Officers' School, the Indiana Sanitary Water Association, the Indiana Society for the Study and Prevention of Tuberculosis, Visiting Nurses Association, the Physic-Medical, Homeopathic and Eclectic State Medical Societies, the Indiana Dental Society, Indiana Pharmaceutical Society, the State Charitable Institutions, the Indiana University School of Medicine, the state and private universities, colleges and schools, the employers and employees organizations, Indiana Federated Clubs, the State Conference of Charities and Correction, Council of Safety First and other organizations, and with these carry on a systematic educational campaign. Such an arrangement would lessen the duplication of activities of the different agencies and would assure the interested agencies that the medical questions would be authoritatively put forth.

Several of the state associations could hold their annual sessions at the same time and in the same city to the advantage of all.

Special investigations could be carried on by some one organization, and thorough study made, instead of several organizations making superficial investigations of the same subject.

Indiana has many speakers who are willing and should be supplying medico-social information at farmers' institutes, teachers' county institutes, public schools, universities, colleges and other schools, lodges and labor organization meetings, employers and business men's meetings, church and religious meetings and other meetings.

Indiana stands today in need of special study and education along the following lines in which the medical profession should be enthusiastic participants and leaders:

1. Delinquency, truancy and crime.
2. Disease Prevention in general.
3. Sanitation and hygiene.
4. Eugenics.
5. Social Service.
6. Nostrums and Quackery.
7. Achievements of Modern Medicine and Surgery.
8. Medical Ethics.
9. Mental Hygiene.
10. Social Hygiene.
11. Infant Welfare.
12. Accident Prevention.
13. Occupational Disease.
14. Child Hygiene.
15. Medical School Inspection.
16. Medical Inspection of Employees.
17. Adequate Hospital Facilities.
    (a) General Hospital.
    (b) Contagious Hospitals.
    (c) Tuberculosis Hospitals and Sanitoria.

(d) Fresh Air Camps.
(e) Maternity Hospitals.
(f) Dispensaries.

18. Oral Hygiene.
19. Conservation of Vision.
20. Physical Training and Recreation.
21. Employers' Liability Law.
22. Mothers' and Orphans' Pension.
23. Food and Its Uses.
24. Industrial Hygiene.

An agency for carrying on educational work should consist of a central bureau from which the work might be directed along the various lines; which should consist of:

1. Lecture Bureau.
   (a) Speakers.
   (b) Lantern Slides.
   (c) Motion Pictures.
2. Publicity Bureau.
   (a) Printed Matter.
   (b) Publications.
   (c) Literature.
   (d) Reports.
   (e) Bulletins.
   (f) News Service.
3. Investigators.
4. Exhibits.
5. Demonstrators.
   (a) Social Workers.
   (b) Visiting Nurses.
   (c) Special Workers.

NEEDED LEGISLATION

To bring Indiana up in the fore-rank with modern health laws which to adequately carry on health work would require the passage of the following laws:

1. Providing counties and cities the right to employ a full time health officer, who should be a graduate from a medical college and especially trained in public health work. The county should also be permitted to compensate this officer adequately.

2. The medical school inspection law should be amended permitting boards of education to employ school nurses and dentists.

3. More liberal appropriation should be procured for the State Board of Health, which would enable it to develop in keeping with the increasing demands being made upon it.

4. The state needs a modern law providing for adequate safety devices and appliances and a rigid enforcement of the same.

The state institutions engaged in industrial pursuits should set an example to private industries in providing sanitary surroundings and adequate safety first appliances for its laborers, and where the inmates are hired to others should require accident prevention equipment as specified by safety first experts and the hygiene and sanitary conditions should be passed on by the State Board of Health.

5. The state provides adequately for its chronic insane the greater part of the time, but there are periods when many insane must be confined in the county jails awaiting admission because provision is not made in advance for their care in the public institutions. This condition could be remedied by appropriations made in advance of their actual need for the construction of suitable buildings to receive the annual increase which can be estimated in advance. It is a shame and a disgrace that any insane man or woman should be obliged to spend even a single night in the county jail. The institutions should also be provided with the funds with which to equip their hospitals with all the necessary apparatus for hydrotherapeutic and electrical treatments in order that those acutely insane might be given concentrated attention and modern treatment, and your committee would recommend that the State Association use its best efforts to bring about conditions in the state hospitals which will make them not only custodial institutions, but modern, up-to-date psychopathic hospitals as well.

6. The law setting apart a day for the observance of disease prevention should be amended, changing the day to the last Friday in April, or some day in the spring of the year before the close of the public schools.

Respectfully submitted.
Otis B. Nesbit, Chairman.

Just at the present time some detail men are distributing samples of Peneguents, or ointments of proprietary formula and manufacture. When asked as to whether the various ointments known as Peneguents had been submitted to the Council on Pharmacy and Chemistry of the A. M. A. for approval, the glib salesman remarked that in order to protect the manufacturers and the originators of the various formulae it was thought best not to submit Peneguents to the Council for consideration. The usual harangue concerning the therapeutic efficiency of the preparations was indulged in by the salesman, and Indiana physicians who will listen to the agent's glowing account of the therapeutic efficiency of Peneguents are reminded that they will be wise if they insist that these preparations having such medical value as topical medication must have the approval of the Council on Pharmacy and Chemistry of the A. M. A. before being accepted for use. The preparations may be all that is claimed for them, but we want to have this opinion from some other than the manufacturers. While we are on this subject we would like to emphasize the statement that has been made heretofore, which in effect is that any honest manufacturer has nothing to fear from the Council on Pharmacy and Chemistry, and if his products are what he represents them to be he ought to be willing not only to have the Council pass upon the products, but be very glad to have the Council's approval, which means so much to the medical profession as a whole. In short, the Council is the only thing that stands between the medical profession and the unscrupulous and dishonest manufacturer of pharmaceutical specialties.

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INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana
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SEPTEMBER 15, 1915

EDITORIALS

OUR PRESIDENT

Frank B. Wynn, President of the Indiana State Medical Association, was born near Brookville, Ind., in 1860. His grandparents, English and Scotch-Irish, came to that region in 1818, and participated in quite an active and influential way in the early development of the state. His father, John Wynn, was a man of fine educational training for that day, being educated for a navigator, and upon one occasion declined the professorship of mathematics in Miami University during its early history. He was cashier of the first bank in Brookville, one of the very first if not the first bank in the state. He did much of the surveying of the land which was being opened up in that region in the early days and devoted himself to the varied interests in and around Brookville. It is due to the part his ancestors played in the development of Indiana that has led to the activity of Dr. Frank B. Wynn in connection with the coming Indiana Centennial Celebration to be held in 1916, for he has been tendered and accepted a position as member of the Historical Commission which will have charge of that important event.

After graduating at DePauw University, Dr. Wynn took a course in medicine at the Miami Medical College of Ohio, and afterward served a year as intern in the Good Samaritan Hospital. After five years in general, special and insane hospital practice, he spent the years 1892 and 1893 in Vienna and Berlin, giving emphasis to work in internal medicine, diagnosis, and pathology. Coming to Indianapolis in the fall of 1893 he was selected as the first city sanitarian of that city. At about the same time he became identified with the Department of Pathology of the Medical College of Indiana, in which position he became active in spreading the newer ideas concerning pathology. In 1896 he organized and conducted the pathologic exhibit of the Indiana State Medical Association, and this feature of the Association's work grew to such size and excellence that in 1899 the Association appropriated money and directed Dr. Wynn to take the Indiana exhibit to that year's session of the American Medical Association. This venture was so well received by the national organization that it resulted the succeeding year in the founding of the scientific exhibit which is now recognized as a prominent and important feature of the American Medical Association work. For sixteen years Dr. Wynn has been the director of this American Medical Association scientific exhibit.

Dr. Wynn is now professor of medicine in the Indiana University School of Medicine, and during his twenty-two years as a teacher of medical subjects he has found great inspiration and delight from association with students and young men, and counts among his best friends the doctor friends of his own generation who are searchers after the truth. While intense in his devotion to the science and practice of medicine, a vocation in which he has been eminently successful, Dr. Wynn is an ardent nature lover and seeks in the wilds of the woods and mountains the rest and recreation from a strenuous life.

In honoring Dr. Wynn, the association is honoring itself, for no man has done more to advance and uphold the association's scientific activities. He is an ardent student, an excellent teacher, and his recognized ability and pleasing personality has brought him well-deserved success and a host of friends in and out of the medical profession.

DOES VACCINATION EVER CAUSE TETANUS?

The idea has prevailed that vaccination may cause tetanus. It was believed that some strains of the virus used in vaccinating against smallpox were contaminated with the germs that caused tetanus, and that in inoculating the scarified skin with such a virus the deadly germs of lockjaw were unsuspectingly introduced into the wound at the same time. The widespread prejudice, the bitter antagonism, and the strong opposition that we encounter in our efforts to enforce general vaccination is based largely — if not altogether — on this belief. It is the basis of all the ridicule that is heaped upon our profession for our attitude on the question of vaccination. We are accused of often causing in the vaccinated person a disease more horrible and

more deadly than smallpox itself. Of course we know that occasionally tetanus has followed vaccination, and the relation of the vaccination to the tetanus as being one of cause and effect has seemed too obvious to contradict.

Statistics that have just been given out by Dr. John F. Anderson of the Federal Public Health Service indicate that this belief is entirely wrong. Anderson has studied the question of the occurrence of tetanus following vaccination since 1904. Forty-one cases of postvaccination lockjaw were investigated, and in no instance were tetanus germs or spores found in virus of the same stock as that used in vaccinating those cases. An examination was made of commercial vaccines for the presence of tetanus bacilli or spores, and although enough virus to vaccinate 200,000 cases was examined, in no instance were such bacilli or spores found. In a series of 585,000 persons vaccinated in the Army and Navy there were only eight cases of tetanus, none of which seemed to have any definite relation to the vaccination. Finally, animals susceptible to both vaccinia and tetanus, e. g., monkeys, and guinea pigs, were inoculated with virus infected with tetanus, and none of these laboratory animals developed lockjaw, in spite of the fact that the vaccination crusts sometimes were found to contain tetanus spores.

The conclusions, based on this scientific investigation, arrived at by this expert of national reputation have a significance that should receive the greatest emphasis throughout the world. Every physician who is engaged in the practice of medicine should know of this investigation and what it has demonstrated. Every physician ought to know now (1) that the vaccine virus on the market used for vaccination contains no tetanus germs or spores, and (2) that the development of lockjaw after vaccination is due to accidental infection at the time of crust formation. Such infection is the result of neglect or carelessness on the part of some one. The blame falls on some person and not on the material or technic used in the vaccination.

Physicians should not forget that vaccination is a surgical procedure and must be respected as such. Not only must strict asepsis be observed in the technic of vaccinating, but the after-care of the wound ought to receive the same attention as the after-care of any surgical wound. The doctor must take care of it *himself*. It may no doubt seem to be too trivial a matter to take personal charge of, but that is just where good care is so essential. If hands other than those of the physician handle the dressing there enters the possibility of contaminating the wound with pathogenic bacteria, such as tetanus bacilli or spores, streptococci, staphylococci, or others. No one knows as well as the physician how to handle a wound of any sort, so that the physician who vaccinates a patient owes it to that patient — whether he be infant, child, or adult — to give him the professional care that is required to prevent absolutely the possibility of the occurrence of any complication whatsoever.

These new facts brought out by Anderson ought to receive the widest publicity among our lay population so that they may be educated to assume the proper attitude on the subject of vaccination. They should be taught (1) that vaccination is the only method we know of by which smallpox may be wiped off the list of diseases affecting the human race; (2) that, therefore, every living human being ought to be vaccinated; (3) that the material used for vaccination contains no element of danger in itself; (4) that the operation of vaccination ought to be carried out with the same care as any regular surgical operation, and that if properly done it carries with it no element of danger; (5) that whatever complication develops following vaccination is due to an accidental infection of the wound; (6) that such complications are absolutely avoidable, and that the safest way to avoid them is to insist that the physician take charge of the entire process from beginning to end.

When physicians begin to realize their full duty to the patients whom they vaccinate, and when people learn of the absolute freedom from complications following vaccination, a spirit of cooperation between the laity and the profession, having as its ultimate purpose the complete eradication of the dreadful disease smallpox, will be inevitable.

VACATION TYPHOID

As the various sources of typhoid infection in cities are eliminated by pure water, pasteurization of milk and improvement in personal hygiene, vacation typhoid becomes more and more prominent.

Most summer resorts at best are only temporary or seasonal. The homes and hotels used by the wealthiest people have only very primitive sanitary accommodations. The lake resorts in particular are in no municipal or town

corporation and have no sanitary supervision except that given by the county health officer who has usually had no experience with sanitation of towns.

The source of help for the hotels is a various one, the help coming to the hotel for all sorts of reasons, since the jobs under the very best conditions can only be temporary. In not a few instances they come in the hope of getting a little breathing spell on the lake. Others come on account of being in a bad physical condition with the hope of improving their health. Among women this poor physical condition may be due to tuberculosis or a mild infection of typhoid. These women may even be syphilitic as they come mostly from homes of the very poorest of our large cities.

The method of sewage disposal at the lakes is a very difficult one. There are no streams into which the sewage may flow and it cannot be run into the lake for that is the source of the water supply.

Because seasons are short and bad ones are almost as frequent as good ones, the owners of the hotels cannot afford to spend enough money for constructing adequate septic tanks.

The milk and ice cream supplies of these resorts are usually dangerous. Because of the seasonal demands for their products the dairymen and ice cream makers cannot afford to go to the expense of making a safe product.

Persons from our cities visiting the lake resorts are usually of the well-to-do class who use only safe water and pasteurized milk in their homes so that they are susceptible to the least bit of typhoid infection in water, milk or other food.

The problem of unsanitary summer resorts may be met in several ways:

1. Persons who have not had typhoid should be vaccinated before going.

2. Every person before going to any summer resort should find out either from the proprietor of the hotel or the State Board of Health just what the sanitary conditions are.

3. Every person conducting a summer hotel or boarding house should obtain a license of the State Board of Health, the fee for which should be large enough to cover the cost of a thorough sanitary survey of that hotel or boarding house.

People are demanding that the city boards of health protect them from sickness in their homes and at their work but are only just now beginning to realize that the state health authorities are not protecting them adequately in their summer recreations.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

Don't forget your membership card when starting for Indianapolis. Registration will be by card, according to the provision of the by-laws of the Association.

The Committee on Arrangements of the Indianapolis session has requested us to urge the members to bring their wives and sweethearts. Special entertainment has been arranged for the visiting ladies.

Members of the House of Delegates should remember that they must have credentials, and such credentials should be in the hands of the chairman of the Committee on Credentials, Dr. Allen Pierson, Spencer, Indiana, prior to the Indianapolis session.

The Place — The Claypool Hotel, Indianapolis.

The Time — Wednesday, Thursday, and Friday, September 22, 23, and 24.

The Attraction — The annual session of the Indiana State Medical Association.

Any member of the Association may secure missing numbers to complete his file of The Journal if he will make his wants known. We should be notified promptly when any number of The Journal is not received by the end of the month of publication.

All doctors are interested in stamping out tuberculosis. Accordingly, the Mississippi Valley Conference on Tuberculosis, the third session of which is to be held at the Claypool Hotel, Indianapolis, September 29, 30, and October 1, should be largely attended, and especially by Indiana physicians.

It is up to you, kind reader, to help yourself and help The Journal by patronizing the advertisers whose announcements are found in this number. We protect your interests by carrying only approved advertising and advertising of responsible firms. Show your appreciation by favoring The Journal's advertisers.

IT is hoped that the chairmen of sections will be prompt in calling the meetings to order at the Indianapolis session. Nothing is so demoralizing to the success of any organization as lack of order and system in conducting its affairs. Not only should the chairmen call the meetings to order on time, and insist upon a strict observance of all the rules governing the conduct of the meetings, but the essayists and discussants should be on hand to take their part in the program when called upon to do so.

SECRETARY HURTY, of the State Board of Health, is an indefatigable worker as an advocate of the all-time health officer. He says that it becomes plainer every day that there will be no further advancement in public health work in Indiana until we have all-time health officers. Other states are going ahead of us very rapidly. The American Medical Association inspections of boards of health have classed ahead of Indiana all the other states that have all or even a few all-time health officers. Indianapolis and Valparaiso are the only points in the state blessed with all-time men, and in Valparaiso the all-time man is a deputy.

THE coming session of the Association promises to be unique in one respect. President Wynn, with his usual enterprise, has arranged for a series of scientific demonstrations, and has enlisted the cooperation of a large number of teachers and laboratory workers in planning for this very instructive feature. It has required a great deal of labor and thought to arrange this part of the program, but we believe that President Wynn and his co-laborers will be well repaid for the effort. We doubt if any member who attends the Indianapolis session will feel that this practical work has not proved to be the most valuable feature of the session.

THE JOURNAL recently was offered by a financially responsible firm a year's contract for one half page of advertising. Notwithstanding the fact that the copy as submitted was a duplicate of the copy used in advertisements appearing in many medical journals, the contract was refused for the reason that ample proof is obtainable to show that the firm in question has not been above the practice of swindling physicians in a rather clever manner whenever possible. THE JOURNAL does not knowingly carry advertising of such firms. The readers of THE JOURNAL ought to appreciate this stand and show their appreciation in a substantial way by giving patronage to THE JOURNAL'S regular advertisers.

SECRETARY COMBS makes a very pertinent suggestion when he asks the Association to elect as delegates to the A. M. A., men who are reasonably sure of attendance at the session of the national organization. There are a certain number of prominent members of the Association who for years have missed scarcely a single session of the national organization. The State Association would be represented, and ably, by delegates selected from among these men. It is unfair to the State Association to be unrepresented in the national organization as a result of electing as delegates men who have not been attending sessions of the national organization and have no definite idea of doing so in the future.

AGAIN we desire to emphasize the importance of carefully editing all manuscripts and discussions that are to be printed in THE JOURNAL. The editor of THE JOURNAL will be saved a great deal of work if that suggestion is followed. Not one physician out of a hundred who submits manuscripts for publication will be satisfied to have his manuscript published just as it is submitted. On the other hand, there are few who could not make their manuscripts presentable for publication without alterations and corrections if a little time is taken for editing with a view to eliminating iteration and reiteration, and correcting errors in construction of sentences, punctuation, capitalization, paragraphing, etc. Furthermore, it should be understood that all manuscripts should be typewritten to conform to the rules of the printers.

Some of the committees of the Association have been unable to collect material promptly that it has been decided to postpone publication of their reports until after the Indianapolis session. Several of the committees are making investigations which require the cooperation of all of the members of the Association, and the difficulty in securing data has made it necessary to complete the reports at the latest possible moment. In this number of THE JOURNAL we are publishing the interrogatories prepared and sent out by the secretaries of the Committee on Physicians' Wel- Criminal Abortion, and the Committee on fare, the Committee to Study the Problem of Quackery and Nostrum Consumption. Every member of the Association should have received

these interrogatories and should answer them promptly with a view to making the work of the committees comprehensive and furnishing adequate information for conclusions that will be helpful in solving the problems before us. Therefore, if you have not complied with any requests that have been made by chairmen of committees, do so at once.

DEATHS

H. B. Turner, M.D., died at Moores Hill, August 6.

C. E. Cox, M.D., of Cannelton, died August 13, aged 73 years.

James H. Kizer, M.D., of Inwood, died August 22, aged 71 years.

Luella M. Derbyshire, M.D., died August 17 at her home in Fort Wayne, aged 55 years.

Wilbur J. Boyden, M.D., aged 64, formerly a practitioner of Muncie, died at Easthaven, August 4.

George A. Barry, M.D., of Fort Wayne, died August 8 at the Lutheran Hospital from typhoid fever and a complication of diseases, aged 44 years.

J. W. McCammon, M.D., died at his home at Indianapolis, August 11, from tuberculosis, aged 38 years. He was a graduate of the old Indiana Medical College of the class of 1901.

Henry E. Washburn, M.D., of Clinton, died Aug. 17 at the City Hospital, Springfield, Ohio, where he had gone to visit relatives. Death was due to pneumonia. Dr. Washburn was thirty years of age, graduated from Indiana University School of Medicine in 1910, and has since been associated with his father in the practice of medicine at Clinton. He was a member of the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Dr. and Mrs. John Harrison Bull have been spending their vacation at Lake Geneva, Wis.

The Open Air School for consumptive children, Indianapolis, will have more than doubled for the coming session.

Dr. and Mrs. F. C. Walker returned August 18 from a boat trip up the Great Lakes, and a visit in New York and Washington, D. C.

Dr. Thomas L. Sullivan, superintendent of the City Hospital, has been attending clinics at the Mayo Brothers' Sanatorium in Rochester, Minn.

Dr. R. C. Light and Dr. Mason Light, Broadripple, suffered recently from a fire at their office which did several hundred dollars' worth of damage.

A proclamation has been issued by Governor Ralston designating Friday, October 1, as Disease Prevention day in Indiana. He urges that the public schools observe this day and that municipal, civic and other organizations cooperate in making this day a success.

Dr. Herman G. Morgan, secretary of the School Nursing System, has received the first report from the board telling of hundreds of schoolchildren whose parents are too poor to provide them with proper medical attention who have been brought back to health through this nursing system. The city now has nine women employed as school nurses, most of these being student nurses at the city hospital. Since the department was started, Dec. 1, 1914, 4,104 calls have been made to the homes of schoolchildren to see if they are living under the proper conditions and to ascertain if the directions of physicians are being carried out.

GENERAL

Dr. C. R. Netherton has removed from Francesville and located at Clarks Hill.

Dr. C. W. Burket of Warsaw has recently been elected secretary of the City Board of Health.

Governor Ralston has issued a proclamation designating October 1 as Disease Prevention Day in Indiana.

Dr. D. E. Douglas of Greensburg has been taking an extended trip through the West, and visited the exposition.

Dr. W. H. Neumeyer, formerly of Chicago, has located at Fort Wayne and has an office at 830 Columbia avenue.

Dr. R. D. Blount of Valparaiso has recovered from a recent severe illness, and is able to take care of his practice again.

Dr. Paul E. Bowers of Michigan City, physician for the state prison, recently received the degree of Master of Science from Valparaiso University.

Dr. J. Z. Powell of Logansport has returned from St. Vincent's Hospital, Indianapolis, following an operation, and his complete recovery is anticipated.

Dr. B. L. Floyd of Evansville recently underwent an operation at the Presbyterian Hospital, Chicago, but has returned home and is making a satisfactory recovery.

The Training School for Nurses of Dr. W. B. Fletcher's Sanatorium held their graduating exercises August 18, at which time five nurses received their diplomas.

Dr. E. L. Dewey, secretary of the Board of Health of Whiting, has been confined at St. Margaret's Hospital suffering from blood poison as a result of a wire injury to his right foot received while in bathing.

The beautiful country home of Dr. Thomas B. Noble, located about two miles northwest of Indianapolis, was destroyed by fire early in the morning of August 22. The family barely escaped with their lives. The loss is estimated at about $30,000.

Dr. Fred Metts of Bluffton has rented a large residence property and converted it into a hospital. He has fitted up several private rooms, a fully equipped operating room, and installed one of the latest improved Roentgen-ray machines.

The Thirteenth District Medical Society held their annual outing at Culver, August 27. Boating, bathing, picnic lunch at noon, scientific and business session in the afternoon, and a banquet at the Palmer House in the evening made up the day's program.

Dr. Paul Ehrlich, discoverer of salvarsan and diphtheria antitoxin, chief of the German Government's Institute at Frankfort, and one of the most celebrated medical scientists of the world, died August 20 at Bad Homburg, Germany, of heart disease, aged 61 years.

Dr. E. O. Daniels has moved from LaFontaine to Marion, Ind., and has opened offices at 203-204 Glass Block. Dr. Daniels has returned recently from New York and Boston where he has been taking post-graduate work, including Dr. Richard Cabot's course on physical diagnosis.

Dr. J. Herman Wylie of Bloomington, who graduated from Indiana University School of Medicine two years ago, will leave soon for Pekin, China, as a medical missionary. He goes under the auspices of the Presbyterian Missionary Board and at the expense of the Rockefeller Foundation.

The Sullivan County Medical Society is putting out a little sheet called *Monthly Notes* which contains a report of their last meeting, program of the coming meeting, announcements of various kinds, editorial comments on present-day questions, and is a medium for keeping alive the interests of the society.

In the recent examination by the State Board of Medical Registration and Examination the highest grade was made by a woman, Dr. Mollie King of Union City, who graduated this spring from the Indiana University School of Medicine and is now serving as intern at the Robert W. Long Hospital, Indianapolis. Thirty-nine other students took the examination

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The Frank S. Betz Company of Hammond has made a change in the personnel of the firm, and a coterie of business men have purchased a large interest in the company. Mr. Frank S. Betz, who hitherto has been virtually the sole head of this large business, has felt the need of active assistance in the management of the affairs of the concern, and especially to carry out the plans of extension along the many lines in which the company is interested; hence the change.

Governor Samuel M. Ralston has announced recently the appointment of a commission to investigate the causes of mental deficiency in Indiana and to make recommendations for the prevention and cure, if possible, of such deficiency. The commission is as follows: Francis H. Gavisk, chairman of Committee on Hospitals for the Insane of the Board of State Charities; George F. Ebenharter, medical superintendent Central Indiana Hospital for the Insane, Indianapolis; Samuel E.

Smith, medical superintendent Eastern Indiana Hospital for the Insane, Richmond; Charles P. Emerson, dean Indiana University School of Medicine, Indianapolis; W. C. Van Nuys, superintendent Indiana Village for Epileptics, Newcastle; George S. Bliss, superintendent School for Feeble Minded Youth, Fort Wayne; Frank B. Culbertson, state senator, Vincennes, and Charles A. McGonagle, state representative, Muncie.

The Mississippi Valley Conference on Tuberculosis will meet at Indianapolis, September 29, 30, and October 1. The date was chosen to fit in with Indiana's state-wide observance of Disease Prevention Day, and the conference will be attended by large delegations from the eighteen states which comprise the Conference. A program of unusual interest to Mississippi Valley anti-tuberculosis workers has been prepared by the Central Council, and tuberculosis in all its phases and from every standpoint will be discussed by general practitioners and tuberculosis experts from a dozen states. The evening of the 30th will be given over entirely to social activity, and one feature of the last day will be a review of the Indianapolis Disease Prevention Day pageant. Mail concerning the Conference should be directed to W. D. Thurber, 210 Public Savings Insurance Building, Indianapolis.

Homage was paid to Dr. G. W. H. Kemper of Muncie on August 19 when hundreds of people attended a reception at the Muncie Commercial Club given in celebration of the fiftieth anniversary of his advent in medical and social circles of Muncie, and greetings were received by Dr. Kemper from some of the most prominent medical men of the Middle West. Dr. Kemper has made an enviable record in the completion of fifty years of uninterrupted practice of medicine, and he has gained a standing in the state as a physician, surgeon, and writer that he well deserves. He is thorough, competent, upright, exceedingly conscientious in all things, and of a high moral character. He has been influential in the State Association, and no one has been more untiring in his efforts for that organization than he. Dr. Kemper presented to his friends on this occasion a fitting souvenir in the way of a card bearing pictures of himself and wife and their first home.

PUBLIC HEALTH

Child Life is the most important resource of a state, yet we permit one in eight of all infants that are born to die. In this matter the medical profession carries a heavy responsibility.

The State of Florida has recently enacted a state wide vital statistics law. The law, with the exception of a few changes, is the model law recommended by the U. S. Bureau of Statistics. The people of Florida are to be congratulated on this forward step.

"The Summer Infant Sick and Death Rates may be reduced," says McClure and Sauer, "by (1) decrease of heat production by giving less food, more suitable food and more water; (2) increase heat elimination by less and more permeable clothing, by circulation of air and frequent baths; (3) guard against infection through contact with sick children, through food and otherwise."

Canned Beans Are Adulterated, as appears from a judgment in the United States court in the East District of Pennsylvania against the East Brooklin Preserving Works, East Brooklin, Md. The health department proved that "inferiority was concealed, and that the product consisted in part of decomposed vegetable product. Now, what have we come to that canning works should put up adulterated beans?

Terminal Disinfection is passing. In Providence, R. I., terminal disinfection after scarlet fever and diphtheria has been abandoned since 1905, and the records show that the prevalence of these diseases has been no greater than in those cities in which terminal disinfection is practiced. The New York City Health Department abandoned terminal disinfection after diphtheria in 1912. Both Providence and New York have abandoned terminal disinfection after German measles, measles, whooping cough, poliomyelitis, cerebrospinal meningitis. It is very doubtful that terminal disinfection is of any value. At least, disinfection as ordinarily practiced is of no value. It is generally true of diphtheria that all susceptible persons in the house or apartment are exposed before the first case is isolated, and the isolation room is used for all cases before any terminal disinfection is attempted.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

MEMBERS REINSTATED DURING AUGUST

S. W. Hervey.....Fortville
J. H. Walker.....Jeffersonville
A. L. Wilson.....Indianapolis
C. W. Dancer.....Stroh
George H. Warne.....Hobbs

MUNCIE ACADEMY OF MEDICINE

Meeting of July 23, 1915

The regular meeting of the Muncie Academy of Medicine was held in the Y. M. C. A. building, Friday evening, July 23, and was called to order at 8:15 by President O. E. Spurgeon, M.D.

Dr. B. B. Morrow conducted a quiz on the anatomy of the liver, which increased our respect for the profound learning of one Henry Gray, F.R.S.

Dr. O. E. Spurgeon told of the conclusions he had drawn from his recent observations of the use of radium in the treatment of cancer at the Johns Hopkins University, saying: "My information was obtained from the clinics of Dr. Howard A. Kelly, under the direction of Drs. Burnham and Lewis. Radium does cure many cases of cancer beyond any hope of surgical aid. The two varieties of cancer that respond most satisfactorily to radium therapy are the small round celled sarcoma and the squamous celled carcinoma of the cervix uteri. Fibroids are quickly cured. Hodgkin's disease has also been cured. Idiopathic hemorrhage from the uterus is cured in one treatment, by using about seven grains inside the uterus for an hour and twenty minutes. Radiation continued three hours or longer may bring on the menopause. Long radiation of the skin will cause a burn, and its use near the rectum is likely to cause inflammation and diarrhea. However the use of radium in experienced hands is much safer than is the Roentgen ray. The radium rays appear to select the abnormal rapidly growing cells and destroy them, leaving the normal tissue cell unharmed.

"A young lady with a mediastinal lympho-sarcoma extending into the neck and down to the diaphragm and occupying one-third of the right side of the chest was entirely cured in a few months by radiation at intervals of a few weeks. Another with a similar tumor extending into the spinal column causing complete paralysis of legs, bladder and rectum was completely cured after a few treatments. She now does ordinary work and dances. A case of squamous celled carcinoma of the uterus; very extensive, involving both rectum and bladder forming one mass of carcinomatous tissue, absolutely inoperable, was cured, a rectovaginal fistula resulting. A man with a skin carcinoma adherent to the temporal bone, and inoperable, yielded readily to treatment. Now these men do not claim that all kinds of cancer, nor all the cases of any kind of cancer can be cured by radium, but it certainly works wonders in many instances."

In the discussion Dr. Andrews said he had learned to dread the approach of patients with cancer of the cervix, realizing what a small per cent. were really cured. He also spoke of the good results sometimes obtained by protracted low degree cautery methods, and how a degree of heat harmless to normal tissue or from which it could easily rally, proved destructive to the mushroom growth of malignancy.

Dr. Mix referred to the pastes of the arsenic and zinc types so commonly and sometimes successfully used by quack and "cancer specialists," and intimated that in many instances, such as the smaller epitheliomata of the skin, its use was satisfactory especially if followed by several Roentgen ray exposures. The laity is not so far wrong when they assume that a cancer has "roots" for we know that unless extensive surgery is performed some of these radiating tendrils of infection may be severed and left dormant to become active later.

Dr. Wadsworth told of a case where a "spider" cancer involving a large part of the nose was successfully removed by a caustic paste.

It was moved and carried that the academy adjourn till the second Friday in September, 1915.

Adjourned. H. D. FAIR, Secretary.

DELAWARE COUNTY

The regular meeting of the Delaware County Medical Society was held in the Muncie Y. M. C. A. building, Friday evening, August 6, and was called to order at 8:15 by the president, Dr. C. M. Mix.

Dr. G. W. H. Kemper announced the recent death of Dr. W. J. Boyden, a former member of this society, and several physicians present paid a tribute to his ability as a physician and his worth as a citizen.

Dr. W. W. Wadsworth read an able paper on the diagnosis of insanity, saying:

"Insanity, like the Kingdom of Heaven, is not lo! here, or lo! there, for it is within us as well as round about us. Tests of insanity on grounds of mental capacity are matters of proof, by determining whether the acts were the acts of a rational individual. A physician examining a patient has a three-fold responsibility: (1) to the patient; (2) his family; (3) the state. A complete personal and family history should be obtained. Birth is not a child's beginning. Very important are the mental and moral standards of the individual and his general attitude toward life. Mind like the body begins to deteriorate when it ceases to develop. Metabolism must be considered. Sense disturbances and hallucinations are among the earliest evidences of mental impairment. Primarily all defects in intellect or judgment are associated with defects of self consciousness and conduct. There may be physical inhibitions involving the receptive, retentive and elaborative processes classified as tics, automatic movements or speech and negativism.

"Emotion is the dominant impulse of life, and whether of love or hate, faith or fear, will determine its measure of success or failure. Prejudical beliefs may be fanned into a flame of fanaticism under an appeal to the emotions. Two laws must be recognized: We become like that which we love, and we invite that which we fear. Emotion is the link between the intellect and the will. Undeveloped moral sense, undisciplined will, morbid emotions and an untrained mind constitutes a vicious circle. The victim of emotional insanity may be rational on all matters of intellect, yet obsessed with a suicidal or homicidal impulse which he deplores but cannot resist. Neither legislatures, courts or lawyers have yet learned that the individual who imagines that crime pays or that it is even a pleasing pursuit, is laboring under a delusion. The very fact that he is a criminal

is evidence of his insanity. Careful inquiry should be made as to the physical, mental, emotional and moral state of the accused at the time the act charged was committed, and whether he was laboring under a delusion or obsession and whether he realized the nature of his act or knowing it, had the will to refrain from it."

In the discussion Dr. T. J. Bowles said:

"No mental disease is separate from physical disease. Before estimating the degree of mental disturbance study the ailments of the physical body, for this is the key that unlocks all phases of mental aberration. Everything is known by classification. Man is endowed with perception, emotion, volition and intellect. Any one of which may be impaired, but if seriously so, will affect the others. If a man should make a will, rational, coherent in language and perfectly equitable and in harmony with the natural ties of affection, that will should stand no matter whether the testator was periodically insane or wholly so, on certain subjects. Every man is weak minded who cannot form logical conclusions. An insane man may have a bright mind and know the nature of his acts. Typical cases of insane geniuses are Abraham, Moses, Mohammed, Emanuel Swedenborg and John Wesley."

Dr. Kemper: Insanity cannot be diagnosed by book formulae, but by the study of individuality. Nature usually writes a legible hand, yet sometimes the line between sanity and insanity is but dimly drawn. The shrewdness exhibited by the insane is wonderful, and the mentality of the best of us may be keyed up to the pitch where the shock of sudden grief or even joy may snap the cord that controls mental equilibrium.

Adjourned. H. D. Fair, Secretary.

SULLIVAN COUNTY

The August meeting of the Sullivan County Medical Society was held at the home of Dr. James Miles, at Merom, with Dr. Billman in the chair. There being no business to come before the society, the president passed at once to the regular program.

Dr. W. N. Thompson reported a case of puerperal mania probably produced by worry and fear. He gave a digest of the current literature on the subject, especially dealing with etiology. The paper was discussed by Drs. Lowe, Price, Davis, Scott and Rafferty.

Dr. Rafferty of Robinson, Ill., read a paper entitled "Gall Stone Disease." The doctor covered the anatomy of the liver, gallbladder and ducts, considering the etiology of the formation of the stones, bearing on the bacterial and other sources of origin, speaking of location of stones as related to their troublesomeness, he discussed the operative relief of this trouble and the more important features of operative technic. He rather thought that medical treatment was of little avail. Paper was discussed by Drs. Kennedy, Corbin, Yeager, Scott and Davis.

Dr. James Miles read a paper on Infantile Tubercular Meningitis, discussing etiology, symptoms and prognosis, which latter he states to be universally fatal. He reported a considerable number of cases, bearing on the etiology, especially as to malaria and a family history of tuberculosis.

Following this paper the society adjourned to the dining room, where a bounteous luncheon was served by Dr. and Mrs. Miles.

Adjourned. J. B. Maple, Secretary.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

Alfatone.—The Council on Pharmacy and Chemistry finds that Alfatone (The Norwich Pharmacal Co.) is a worthless alcoholic cordial and therefore ineligible for admission to New and Nonofficial Remedies. The council points out that alfalfa is good cattle feed and that only nostrum exploiters have suggested its use as a medicine for human beings. Based on the claimed composition, each maximum dose (3 fluidrams) should represent 45 grains of alfalfa, 1 grain of taraxacum, ⅜ grain of gentian, 1/100 grain of berberin hydrochloride and 27 minims of alcohol. Since the bitter drugs are present in such small amounts that the preparation is almost devoid of bitterness and as the medicinal value of alfalfa is practically nil it is evident that whatever action Alfatone may have is due to the stimulant effects of the alcohol (*Jour. A. M. A.*, Aug. 7, 1915, p. 548).

Uricsol.—The Council on Pharmacy and Chemistry reports that Uricsol (Uricsol Chemical Co.) is a mixture of well-known drugs, marketed with false claims as to therapeutic action, with misleading and meaningless statements as to composition and under a name which invites uncritical prescribing. Examination in the A. M. A. Chemical Laboratory showed Uricsol to be a solution containing a large amount of sodium phosphate (64.20 gm. in 100 c.c.) with small amounts of lithium, nitrate, citric acid and glycerin, with probably some vegetable extract (*Jour. A. M. A.*, Aug. 14, 1915, p. 638).

Duodenin, Armour.—Duodenin, Armour (Armour & Company) is said to be prepared from the glandular or epithelial layer and mucous lining of the hog duodenum and to contain the maximum amount of secretin and enterokinase in stable form. The Council on Pharmacy and Chemistry held that there is no evidence for the administration of secretin or enterokinase and that, so far as the available evidence goes, these substances are inactive when administered. The Council voted that Duodenin (Armour) be not further considered until evidence is submitted to show that there are conditions in which secretin or enterokinase are absent and that these substances may be utilized by the organism if administered (*Jour. A. M. A.*, Aug. 14, 1915, p. 639).

Jubol.—Geo. J. Wallau, Inc., the U. S. agent of the French proprietary Jubol advises physicians to "jubolise" their intestines with "Jubol" if they suffer from constipation, hemorrhoids, and a long list of other conditions. The Council on Pharmacy and Chemistry held Jubol ineligible for New and Nonofficial Remedies because the composition is not declared; because grossly incorrect and unwarranted claims are made for its therapeutic action; because the name does not indicate the alleged ingredients and because so much of the composition as is declared indicates an unscientific mixture (*Jour. A. M. A.*, Aug. 14, 1915, p. 629).

Urodonal.—Urodonal is a French proprietary sold in the United States by Geo. J. Wallau, Inc., and is said to contain a chemical combination of lysidin, sidonal and hexamethylenamine. The Council on Pharmacy and Chemistry finds that Urodonal is ineligible for New and Nonofficial Remedies because it is marketed under inconsistent statements of composition and with exaggerated therapeutic claims; because the name is nondescriptive; the combination is unscientific and because it is marketed in patent medicine style (*Jour. A. M. A.*, Aug. 14, 1915, p. 639).

Oil-of-Salt.—According to C. A. Mosso all diseases are "systemic poisons" in the body and his "Oil-of-Salt" destroys all poisons and hence cures all diseases. It is exploited chiefly to factory foremen and superin-

tendents as a first aid treatment. From an examination in the A. M. A. Chemical Laboratory it was concluded that "Oil-of-Salt" is a mixture consisting of about ⅔ linseed oil with ⅓ of a mixture of essential oils, including turpentine, camphor and sassafras, containing a little chloride and free hydrochloric acid. It appears that "Oil-of-Salt" is also exploited under the name "First Aid Treatment" by the Pan-Alert Laboratories, Chicago (*Jour. A. M. A.*, Aug. 14, 1915, p. 640).

Mixed Vaccines.—There is no rational basis for the use of mixed vaccines. So far as infectious diseases, the etiology of which is known, are concerned they are caused by a single, specific organism as for instance in diphtheria, tetanus, meningitis, typhoid fever. The mere presence of a multiplicity of organisms in cultures taken from an infected region is no sign that the symptoms are due to all the organisms. The use of the stock mixed vaccines of commerce is irrational because it is based on the conception that infections are caused by more than one kind of micro-organism; it is harmful because it encourages superficial examination, slip-shod diagnosis and routine treatment without individualization; it is unnecessary because, when the physician desires to use more than one vaccine, he can inject them separately or mix them at the time of injection (*Jour. A. M. A.*, Aug. 21, 1915, p. 719).

Fisher Remedy.—According to the A. M. A. Chemical Laboratory, Fisher Remedy, a nostrum sold for the treatment of syphilis (five capsules cost $25), is composed of mercury subsulphate (Turpeth mineral) and mercury with chalk (*Jour. A. M. A.*, Aug. 21, 1915, p. 733).

Pertussis Vaccine.—The New York Department of Health appeals to the physicians of New York for a more extended use of vaccine in the treatment of pertussis. Most favorable results have been obtained with the prophylactic use of the vaccine (*Jour. A. M. A.*, Aug. 21, 1915, p. 724).

Formamint.—Formamint are throat tablets said to contain a compound of formaldehyd and milk sugar. In the United States it is advertised to physicians, while in England the public is asked to use it for affections of many kinds. The Council on Pharmacy and Chemistry reports that false statements are made in regard to the composition of Formamint; grossly unwarranted claims are made for its therapeutic properties, and therefore its exploitation to the public is a public danger. The Council published the account of the exhaustive bacteriologic examination to call attention to the evils connected with Formamint and to the inefficiency of all methods of sterilizing the throat (*Jour. A. M. A.*, Aug. 28, 1915, p. 816).

BOOK REVIEWS

Pediatrics and Orthopedic Surgery. Volume of the Practical Medicine Series for 1915. Pediatrics edited by Isaac A. Abt, M.D.; Orthopedic Surgery edited by John Ridlon, A.M., M.D., with the collaboration of Charles A. Parker, M.D. Cloth, $1.35; price of series of ten volumes, $10. The Year Book Publishers, Chicago.

The greater part (about two-thirds) of this volume is taken up by Abt's résumé of the advances made in the field of pediatrics during the year, and the rest is devoted to orthopedics. Both these reviewers have been doing this work so long that they know how to embody all the important advances in their respective fields in the briefest space, so that the résumé of each although brief is complete. The general physician will find enough "new stuff" in the volume to justify his reading every page of it.

The Medical Clinics of Chicago. Volume 1, Number 1 (July, 1915). Octavo of 208 pages, thirty-seven illustrations. Published bi-monthly. Price per year, paper, $8; cloth, $12. W. B. Saunders Company, Philadelphia and London.

In issuing this volume the publishers announce that they are responding to a demand by physicians all over the country for a publication of this sort that will appear at regular intervals. The publishers have secured the clinics of some of the best clinical teachers of Chicago in every department of internal medicine. This volume is sufficiently good evidence of their desire to serve physicians in an entirely new way, one that is worthy of such a well-known medical publishing house. It contains clinics by such men as Mix, Abt, Preble, Tice, Hamill and others. The cases are given in such detail that the reader gets the benefit of all that is important in relation to the case under discussion. In that way the physician can get in his library just as much of internal medicine as he could by taking a trip to Chicago and following these men around on their ward visits. It is obvious that no one who is sincere in his desire to learn and to be up to date in modern medicine can afford to do without this valuable publication.

A Text Book of Chemistry and Chemical Uranalysis for Nurses. By Harold L. Amoss, S.B., S.M., M.D., Dr.P.H., formerly Chemist, Hygienic Laboratory, U. S. Public Health Service; Physiological Chemist, U. S. Bureau of Chemistry; Instructor in Physiological Chemistry, George Washington University Medical School; Assistant in Preventive Medicine, Harvard Medical School. 12 mo., 268 pages; cloth, $1.50, net. Lea & Febiger, publishers, Philadelphia and New York, 1915.

Everyone will agree with the author that "the more chemistry a nurse knows in usable form the greater her value to the patient and to the physician." An elementary knowledge of chemistry as it pertains to the human body and to drugs is essential to the nurse who is to do intelligent work. This textbook by Amoss is admirably adapted for the purpose of conveying an elementary knowledge. The subject matter is presented in such clear and simple style that it can be easily assimilated by the nurse. It is a pleasure, indeed, to have the opportunity of recommending to the profession such a splendid little volume by so able an author.

Scopolamine-Morphine Anaesthesia. By Bertha Van Hoosen, M.A., M.D., Attending Gynecologist to Cook County Hospital, Provident Hospital and Mary Thompson Hospital, and a Psychological Study of "Twilight Sleep" made by the Giessen Method. By Elizabeth Ross Shaw, Consulting Psychologist. Cloth. The House of Manz: Chicago.

The first half of this volume is taken up by Dr. Van Hoosen with her strong advocacy of scopolamine-morphine anesthesia based on her experience with it in a series of 5,000 surgical operative cases and 100 obstetrical cases. The difference in the application of this form of anesthesia in surgical patients and in labor cases is pointed out. Throughout the work the attitude of the author as being too dogmatic is quite apparent. There is good ground for disagreeing with her in some respects. Besides, her style is somewhat poor, her use of English is faulty, and conspicuous errors of one sort or another occur here and there.

The physiological study of Elizabeth Shaw fills up the second half of this volume, and although it is quite interesting and entertaining it contains nothing that could be of practical value to the general physician.

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ORIGINAL ARTICLES

THE RELATION OF ENDAMEBAE TO ALVEOLAR-DENTAL PYORRHEA *

C. C. BASS, M.D.
NEW ORLEANS

Alveolar-dental pyorrhea is a suppurative, destructive and chronic disease of the supporting structures of the teeth. The supporting structures of the teeth are the bone, covered by gums, and the tooth is held firmly in the socket by the periodontal membrane. The condition we have to discuss this evening is one that primarily affects the periodontal membrane, but incidentally also the other structures.

We must have a clear idea of the anatomy of the structure involved if we are to understand the disease, and especially if we are to understand the manner in which the disease is produced by the specific organism to which we wish to call attention. We all appreciate that the tooth is held in its socket by a very tough membrane, the periodontal membrane. That membrane consists of connective tissue fibers which run in many different directions, some running up, some down, and some laterally; they hold the tooth down in its socket, or they hold it up in its socket, whichever you please. Now this membrane is firm and strong and is filled with blood vessels and nerves.

The disease alveolar-dental pyorrhea begins at the attachment of the gum to the tooth. The gum is attached to the tooth by the periodontal membrane, and this is where the disease begins. Gradually and slowly it progresses, the periodontal membrane which holds the tooth in place being slowly destroyed, not over a few days or weeks or even months, but years. In fact, the average duration of pyorrhea around the individual tooth is probably not less than ten years. In other words, it takes ten years for a tooth to be destroyed, from the time the pyorrhea starts until the tooth is finally lost. During all that time an inflammatory, suppurating disease is progressing slowly down the periodontal membrane until finally the apex of the root of the tooth is reached. After perhaps five years, or even ten years, if we examine the lesion we find it to consist of a duct extending perhaps half way down the length of the root of the tooth. That duct contains bacteria of many different species, together with food that has accumulated during each meal, and in the very bottom of the duct at the site of the inflammatory disease, there are large numbers of an animal parasite, the *Endameba gingivalis*. If we examine the contents of that duct we find that it contains a large amount of pus as well as food debris that has been snugly packed in there, so that the duct furnishes a fine medium for bacteria.

Most of the disease-producing germs that we know of belong to the vegetable kingdom—those of scarlet fever, pneumonia, tuberculosis, etc., are all vegetables or plants. But the *Endameba gingivalis* is an animal, just as much an animal as a horse. The endamebae are present in large numbers in the bottom of the lesion, but are present in comparatively small numbers in any other part of the lesion. They are present not only on the surface of the granulation tissue, but also in the tissue, and we have been able to demonstrate them at a considerable depth. These parasites have ameboid motion, and move from place to place over the surface of the lesion and also in and out of the diseased tissue. They move into the pyorrhea duct containing many different species of bacteria, and then back down into the tissue.

* Address delivered before the Indiana State Medical Association at Indianapolis, Sept. 23, 1915.

Compared to the size of other bacteria, the endameba is an enormous animal, several hundred times larger than the streptococcus, the staphylococcus or the pneumococcus. Naturally, such an animal crawling back and forth through the tissue and through such a mass of organisms as this pyorrhea duct contains, would mechanically carry smaller organisms back and forth, thus planting and replanting infection in the tissues. Organisms that could not produce disease of their own power, if planted into the tissue, and especially into the damaged tissue, are thus made capable of producing other disease. We have not at present the slightest evidence that this organism that we think is the cause of pyorrhea attacks tissue: we think it is done in an entirely different way.

The disease progresses through the planting and replanting of infection until finally the root of the tooth and periodontal membrane is destroyed and dissected away so that the tooth simply rests in its socket, held by the small amount of tissue around the top of the tooth. The tooth gets loose, and most people recognize pyorrhea at that stage though those familiar with this process will recognize that loosening of the tooth is the end of pyorrhea, not the beginning—the end of a disease that has lasted for ten, twenty or thirty years. So far as that particular tooth is concerned it is the end of the disease.

One thing that prevents the early recognition of pyorrhea is that it begins between the teeth, not in front or behind. When we examine the gum we may think that it is normal, but when we examine with suitable instruments we find that the tooth has become separated from the gum, or the gum from the tooth, for quite a depth. If we remove the content of this space and examine it under the microscope we will find that it contains pus cells and endamebae. Pus cells are not normal for any tooth; they are the result of pyogenic infection and are always an evidence of disease. Whenever a tooth gets loose or is removed or falls out itself, we find that there are small areas of recently living tissue; the balance has been sloughed and suppurated away. It may be laid down as a positive statement that every person loses all of his teeth from this disease if he lives long enough. Many, unfortunately, do not live that long.

Now the animal that produces this disease, *Endameba buccalis,* is one of a large number of animal parasites belonging to the class Ameba. This particular one, so far as anybody knows, does not live any place in the world except in the pyorrhea ducts of human beings, possibly in certain other lesions, and possibly also to some extent may live in certain animals, but no other animal that we know of except one, and that is the dog. If dogs live long enough they lose their teeth by pyorrhea. There is a question if there is any relation between the parasite producing the disease in dogs and in man; it is not probable there is any connection between them.

This endameba has the capacity of moving about, and if we look at it under the microscope we can see that it is irregular in outline. We can make out two portions of the parasite, the outer and the inner parts, and also some very interesting bodies that are foreign. These bodies if stained suitably become almost black. The parasite contains anywhere from one to twelve or fifteen of these bodies. On more thorough study we find that these bodies are nuclei of certain of the cells. I am not prepared at this time to give the correct name of this cell. It is a certain kind of cell that is to be found in practically any intra-inflamed tissue, especially tissue granularly inflamed and in which disease is produced. If I had a chronic ulcer on my skin, suitable examination would demonstrate the presence of these cells or these nuclei of cells. These cells are the food of this parasite. Occasionally we say the parasite contains one or two bacteria. Bacteria are very small compared to the size of the parasite, and it is erroneous to assume that one or two bacteria in the parasite is evidence that they feed on such bacteria. They do not, but occasionally some bacteria get in there accidentally. If we have a large animal feeding on grains of corn on the ground he would pick up some grains of sand also; likewise this big ameba picks up some bacteria. In certain experiments we found large numbers of bacteria attached at one end of the parasite as if they had been fastened to the parasite in some way that we do not at present understand.

Under the microscope we can see these parasites moving about from place to place, and when they come to a narrow place they get thinner and pass on through. In passing between cells, the parasite often drags behind him a mass of bacteria, sometimes of several different kinds. In that way the parasite as it passes in and out the living tooth occasionally carries bacteria in and out and plants them much deeper into the inflamed tissue than they could reach themselves. If these bacteria happen to be pyogenic bacteria, naturally pus formation is stimulated.

If we study microscopic sections of the diseased tissue, not the surface, but deeper tissue, we find the kind of cells on which the endamebae feed are most numerous down in the tissue, the endamebae crawling about hunting their food and accidentally—and incidentally—carrying bacteria with them. It would appear from that that there is more or less symbiosis between the bacteria and the endamebae. It is probable that the bacteria could not get along without the endamebae, and vice versa.

One of the most important questions about pyorrhea is how the endamebae get there. If they are present in such a large percentage of mouths, if everybody loses his teeth from pyorrhea should he live long enough, how is it that it is so widespread and we are just recognizing it? It is impossible for one who has not had experience in other localities all over this country, and the world—it is impossible for him to speak with authority. But I can speak of our experience in New Orleans in examining the mouths of many people. In some five hundred selected cases pyorrhea was diagnosed, and in a great many patients who were supposed not to have pyorrhea. The number of people who have this parasite, and not only this but the pyorrhea lesion demonstrable microscopically, is between 95 and 99 per cent. I do not know what the experience would be if such examinations were carried on elsewhere, but those who have done the most work on the disease in other communities have reached almost the same conclusion, that there is an enormous percentage of infection actually demonstrable. If it is such a widespread disease then there must be a common source of infection. As I explained a moment ago, there is pus being formed in each pyorrheal lesion. Thirty-two teeth would furnish a good quantity of pus daily. We do not see it, we do not realize it has been produced; the only thing we think about is bleeding gums, one of the early symptoms. The gums bleed as long as the granulation is superficial enough to be irritated or influenced by trauma or physical force, such as brushing the teeth, etc. The pus is not recognized except in the very worst stage, but if we make microscopic examination we demonstrate it around many teeth, and frequently we can squeeze out from the pyorrheal lesion as much as a drop or more of pus. We have calculated the amount of pus that must be secreted in an ordinary individual who has thirty-two teeth, and the calculation reaches no less than eight gallons of pus. You say that is an enormous quantity, but I assure you that from the best information we can obtain the estimate is not overdrawn. These figures of course are not for one year, but for twenty to forty years.

The unfortunate thing is that the disease is not more often recognized. I have known individuals who had diseased teeth, and when they expectorated we have found as many as eleven endamebae in a single expectoration. This shows the large number that are being thrown off by individuals who have the disease. It would be impossible to drink after a person whose disease has reached this stage and whose expectoration shows large numbers of endamebae without putting some endamebae into the mouth. On the other hand, there is not the slightest evidence to prove that if we should place living endamebae in large numbers into an absolutely normal and healthy mouth that we could produce the disease. There must be first a lesion. You say we do not have such lesions around our teeth, but after a meal we pick our teeth, or brush the teeth vigorously, and the gum may bleed a little and we think nothing of it, but such a lesion offers ideally favorable soil for the growth of these parasites. Once inoculated with the parasite is all that is necessary, for reproduction and multiplication is very rapid, and a constant source of infection to the other teeth in the mouth is then at hand. It is never necessary to be inoculated from another source again. But you say we have quit drinking after other people, and putting things in our mouths that have been contaminated. Most people are infected before they are grown; they are infected as children. About 50 per cent. of the children are infected by the time they are twelve or fifteen; we can demonstrate the amebae at that age. Now the children being infected shows that the infection must be at home, and not the public drinking cup and public utensils. You say you do not drink after other people or allow your children to drink after other people; but in the home the mother and father have the disease and drink from a common drinking cup. The little boy has a toy horn and the mother shows him how to blow it, and then he puts it into his mouth. In many, many ways we put the disease into the mouths of children, from parents and older members of the family, the grandparents, who are in the last stage—from all of these the child must be getting the organism into his mouth every day. In fact, it would seem now that it is rather an accident if he is not infected. And once the disease is planted there is never any disinfection without treatment. The source of infection is eating and drinking after other peo-

ple. There is not any evidence that this parasite could live in any place except a suppurating lesion of the animal species. It does not live in water or food or vegetables any more than the malaria germ lives in such places. It must have the food on which it feeds. You could not keep any other animal in captivity and have it live and grow unless you supplied the food natural for that species, and the only natural food for the endameba is the product of suppuration.

The parasite is present in all pyorrheal lesions; it is absent in the absence of pyorrheal lesions; it cannot be demonstrated in the absence of suppurating tissue. It has been demonstrated over and over again that the endamebae carry bacteria back and forth into tissue, and that is definite evidence that they bear an etiologic relation to the disease we are discussing. If I placed on my skin a plague bacillus of the most virulent type, as long as the skin was unbroken the plague bacillus would not produce disease; but if the skin should be broken, the plague bacillus would be driven back and forth into the tissue and thus produce disease. The same is true with the organism that we have in pyorrheal disease of the mouth. If the endamebae do not penetrate into the tissue, no disease is produced. That is easily demonstrated. Take an ulcerated surface in any part of the body, inoculate it with saliva from a mouth containing bacteria, and it heals just the same. The bacteria are not enabled to produce disease except they are planted and replanted in the tissue.

I will say in closing that so far as we know there is only one drug that has a specific action against this parasite, and that is emetin. Our knowledge of the disease and of the parasite is so imperfect, and our knowledge of the action of emetin is so imperfect, that our methods of treatment are far from perfect and far from satisfactory. It frequently occurs that a few doses of emetin are followed by entire disappearance of the endameba and of the lesions. They remain absent for variable lengths of time, but since the source of reinfection is so very great, as everybody else has the same disease and we are constantly exposed to reinfection, the organism appears again after a time. We must know a great deal more about the use of emetin, a great deal more about the manner in which the parasite is transferred from one individual to another, before we can lay down dogmatic rules for treatment and before we will be able to be perfectly successful in treatment.

PATHOGENESIS OF SPONTANEOUS AND EXPERIMENTAL APPENDICITIS, ULCER OF THE STOMACH AND CHOLECYSTITIS *

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Although the infectious nature of appendicitis, of cholecystitis and, to a large extent, of ulcer of the stomach is now quite generally conceded, there is still much speculation as to the exact mechanism of the occurrence of each, and especially as to the supposed etiologic relationship between them. They are still believed to be due either to surface infection from the lumen aided by various mechanical factors, such as foreign bodies and spasms, or to migration of the bacteria through the lymphatics, even against the normal lymph stream, and only rarely to embolism from some distant focus, such as infected tonsils, pyorrheal pockets or the intestinal tract. The fact that these organs are developed from a small segment of the primitive alimentary tract and the fact that irritation of the colon (Cannon) and disease in the appendix or gallbladder, for example, will reflexly cause delayed emptying of the stomach and hyperacidity with the accompanying symptoms is believed by some to be one reason why two or more of these organs may be diseased simultaneously (Cannon,[1] Litthauer,[2] Mayo,[3] MacCarty,[4] Billings,[5] Graham and Guthrie,[6] LaRoque[7]). The reason for the lack of exact knowledge as to their origin is due largely to a study of end-results in patients, and not enough of experimental study in animals.

I wish to call attention briefly to certain results following intravenous injection of streptococci which seem to throw some light on the

* From Memorial Institute for Infectious Diseases, Chicago, and the Mayo Foundation, Rochester, Minn.

* Read before the Indiana State Medical Association, Indianapolis, Sept. 23, 1915.

1. Hedblom, C. A., and Cannon, W. B.: Some Conditions Affecting the Discharge of Food from the Stomach, Am. Jour. Med. Sc., 1909, cxxxviii, 504.

2. Litthauer, M.: Experimentelle Untersuchungen zur Pathogenese des runden Magengeschwürs, Virchows Arch., 1909, cxcv, 317.

3. Mayo, W. J.: Pancreatitis Resulting from Gallstone Disease, Jour. Am. Med. Assn., 1908, l, 1161.

4. MacCarty, W. C., and McGrath, B. F.: Relation between Appendicitis and Disturbance in the Gastro-Duodeno-Hepatico-Pancreatic Physiological System, Ann. Surg., 1910, lii, 801.

5. Billings, F.: The Local Effects of Gallbladder Infections and Gallstones upon the Digestive Tract and Liver, Internat. Clin., 1910, 67.

6. Graham, C., and Guthrie, C.: The Dyspeptic Type of Chronic Appendicitis, Jour. Am. Med. Assn., 1910, liv, 960.

7. LaRoque, G. P.: Chronic Ulcer of the Pylorus (Duodenal and Gastric) Secondary to Appendicitis, Colitis, Bile Tract Infection, and other Foci of Infection within the Area Drained by the Portal Vein, Am. Jour. Med. Sc., 1913, cxlvi, 566.

mode of origin and pathogenesis of appendicitis, ulcer of the stomach and cholecystitis.

The technic employed and the details of the experiments in appendicitis have already appeared,[8] and those on ulcer and cholecystitis will appear shortly.

The accompanying table gives the incidence of lesions in the appendix, stomach and duodenum, gallbladder, pancreas and intestines in animals following intravenous injection of streptococci from appendicitis, ulcer and cholecystitis, when first isolated, after cultivation on artificial media for some time and after animal passage. In the last line is given the average percentage of animals showing lesions in these organs following the injection of numerous strains of streptococci into many animals exclusive of the specific strains, and serves for comparison. It is seen that fourteen strains from appendicitis produced lesions in the appendix in 68 per cent. of the sixty-eight rabbits injected, which is in marked contrast to an average of only 5 per cent. of lesions in the appendix in the animals injected with the strains as isolated from sources other than appendicitis. Eighteen strains from ulcer of the stomach or duodenum produced hemorrhage in 60 per cent., and ulcer of the stomach or duodenum in 60 per cent., a combined total of 74 per cent. of the 103 animals injected, in contrast to an average of 20 per cent. hemorrhages and 9 per cent. ulcers following the injection of other strains. Twelve strains from cholecystitis produced lesions of the gallbladder in 80 per cent. of the forty-one animals injected, in contrast to an average incidence of only 11 per cent. of the other strains.

ELECTIVE LOCALIZATION OF STREPTOCOCCI FROM APPENDICITIS, ULCER OF THE STOMACH AND CHOLECYSTITIS

Source of Streptococci	Time of Use	Strain	Animals Injected	Percentage of Animals Showing Lesions in					
				Appendix	Stom. Hem.	Duod. Ul.	Gallbladder	Pancreas	Intestines
Appendicitis	When isolated	14	68	68	6	1	1	0	9
	Later	8	26	15	19	15	4	0	0
	After animal passage	7	22	45	45	30	40	0	20
Ulcer of stomach in man	When isolated	18	103	2	60	60	20	3	7
	Later	8	22	5	5	0	5	0	0
	After animal passage	7	39	0	23	33	30	15	15
Cholecystitis	When isolated	12	41	0	29	15	80	5	17
	Later	5	14	14	28	14	7	0	0
	After animal passage	4	16	0	31	13	56	19	13
Average per cent. of animals showing lesions in these organs exclusive of specific strains				5	20	9	11	6	8

The streptococci with which these results were obtained were mainly isolated from the involved tissues or from the lymph glands draining the area, and were removed during life in the operating room. A number of strains from each, however, were obtained from the apparent infection-atrium. In acute appendicitis the peculiar affinity of the streptococci in the focus was present only at the time of the attack and disappeared promptly later, while in one case of chronic ulcer of the stomach it was found present over a period of six months. The strains resemble each other very closely indeed, those from appendicitis, however, being the least virulent, those from ulcer occupying a middle position, and those from cholecystitis being the most virulent. It has been suggested that the localization in these organs of bacteria so nearly alike may be due, in a measure, to the fact that they are derived from the same segment of the primitive alimentary tract affording, as it were, a common soil.

From studies of the effect of animal passage on nonvirulent "laboratory" strains of streptococci, it was found that virulence appeared to be a factor in determining the place of survival of streptococci on intravenous injection. If the localization is related to virulence, then the incidence of the occurrence of ulcer and cholecystitis should become greater as the appendi-

8. Rosenow, E. C.: The Bacteriology of Appendicitis and Its Production by Intravenous Injection of Streptococci and Colon Bacilli, Jour. Infect. Dis., 1915, xvi, No. 2, 240.

citis strains are passed through animals, and appendicitis should occur oftener after the ulcer and cholecystitis strain loses virulence on cultivation on artificial media. This is found actually to be the case. Thus, the strains from appendicitis, on isolation, produced ulcer of the stomach or duodenum and lesions in the gallbladder in 1 per cent. of the animals, whereas after animal passage lesions occurred in 30 and 40 per cent. respectively; the ulcer strain produced lesions in the gallbladder in 20 per cent., when isolated, and in 30 per cent. after animal passage.

The more frequent occurrence of pancreatitis and cholecystitis, or pancreatitis and ulcer of the stomach or duodenum, than of appendicitis and pancreatitis is well known. Since lesions of the pancreas following injection of the strains from ulcer and cholecystitis as isolated (3 per cent. and 5 per cent.), and especially after animal passage (15 per cent. and 19 per cent.), are more common than following injection of those from appendicitis, it might be suggested that the reason for more frequent occurrence in man of pancreatitis with ulcer and cholecystitis is due partly to the fact that the infecting organisms are more nearly of the grade of virulence necessary to infect the pancreas, and not wholly due to the greater proximity of the organs. And why might not the greater severity of symptoms and the more frequent occurrence of fatal peritonitis following surgical intervention in pancreatitis, cholecystitis and after perforation in gastric ulcer than in appendicitis be due to the greater virulence of the infecting streptococcus or other bacteria more than to the fact that they are situated in the upper portion of the peritoneal cavity as is now generally believed? The fact that the virulence of the strains having elective affinity for the appendix is low is undoubtedly an important factor in the successful surgical treatment of appendicitis. If this were not so, strangulation and perforation, so prone to occur, would lead almost always to a fatal peritonitis. It might be suggested, too, that the real cause of a fatal peritonitis with or without surgical intervention is due more often to invasion by particularly virulent bacteria than to other factors, such as slight variations in operative technic.

The occurrence of lesions in the intestines following injection of the strains from appendicitis (9 per cent.), ulcer of the stomach (7 per cent.) and cholecystitis (17 per cent.) is due partly to the large doses injected, but even then it is probably little greater than could reasonably be expected in the spontaneous disease in man, could a thorough search for them be made. Here, again, the incidence of lesions tends to become greater on animal passage. It should be stated here that in some instances colon bacilli from the appendix in appendicitis and the gallbladder in cholecystitis showed a similar elective affinity for the organ from which isolated when injected in animals.

From these results the conclusion seems warranted that appendicitis, ulcer of the stomach and duodenum, and cholecystitis are largely embolic infections from some distant focus of infection, or even from the more or less normal intestinal tract, by streptococci or other bacteria having elective affinity for these structures, and that the simultaneous presence of two or more of these diseases in the same individual is in the beginning due more often to this cause and not so often to infection by continuity or by way of the lymphatics. Finally, since these bacteria can be made to shift in their localization by cultivation on artificial media and by animal passage, and because the peculiar affinity of the strains in the focus is present only at the time of the attack, it is highly probable that the so-called focus of infection is not only the place of entrance but the place where opportunity is afforded for bacteria to acquire the various affinities necessary to infect. Hence the importance of a thorough search for the presence of foci of infection and their eradication if possible. In other words, the presence of appendicitis and especially of ulcer of the stomach and duodenum and cholecystitis are to be considered good evidence for the existence of some distant focus of infection, and, because these lesions may act as secondary foci, drainage or surgical removal of the diseased tissue, if this can be done with little risk, is undoubtedly a most rational treatment.

THE POSITION OF THE NORMAL STOMACH, WITH OBSERVATIONS ON THE MOVEMENTS OF THE DIAPHRAGM *

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Forty young adults, 19 to 26 years of age, twenty-eight men and twelve young women, were given a buttermilk-barium sulphate meal. Their stomachs were then examined fluoroscopically.

Prior to giving the meal, copper washers were fixed with adhesive tape to the abdominal wall

* Read before the Indiana State Medical Association at Lafayette, September, 1914.

in the mesial sagittal plane, one on the processus xyphoideus, a second at the transpyloric plane, a third on the umbilicus, and in the young women, a fourth was placed at the intersection of the intertubercular plane and the linea alba. These washers, plainly visible on the fluoroscopic screen, give the chief horizontal planes and the midsagittal plane. An adjustable diaphragm made it possible to cut the rays to a vertical slit, to a horizontal slit, or to a very small square opening, in which latter case, the rays are nearly parallel.

Inasmuch as in the young women only a thin kimono intervened between the washers and the thirteen-inch-square fluoroscopic screen, while in the case of the men the screen was placed immediately upon the washers and abdominal wall, the error due to divergent rays is negligible, and checked by narrowing the diaphragm.

Sheets of very thin tracing paper were placed upon the fluoroscopic screen and tracings made of the stomach while filling, when full, in deepest inspiration and fullest expiration accompanied by contraction of abdominal walls. Tracings were also made of the diaphragm, showing its normal position, its swing in normal respiration, and its extreme positions in forced inspiration and expiration. These same tracings were repeated with the individual in horizontal position (on back). Roentgen-ray photographs were made of five cases, for comparison and check.

In males, when standing, the average position of the lower border of the stomach was found to be one inch below the umbilicus, the extremes being from one inch above to three inches below this plane. In females, when standing, the lower border of the stomach was found to be three inches below the umbilical plane, the extremes being one and three-eights to four and one-half inches below the umbilical plane. When standing, the stomach is either J- or cow-horn shaped. The pyloric valve points upward, backward, and to the right. When lying down, the pyloric valve is one-third of an inch below the transpyloric plane, and in 12½ per cent. of cases, it points upward, backward, and to the left; the descending portion of the duodenum then lies posterior to the pyloric portion of the stomach.

The cardiac stomach is not a storehouse for food, as commonly stated, but when standing, a gas pocket. The stomach fills from above downward, the upper border of its contents remaining, during filling, at the level of the esophageal opening.

The stomach is always as big as its contents. Its shape depends upon the quantity of its contents, the position of the body, the distention of adjacent viscera, peristalsis, and respiration. In certain cases even the beat of the heart gives a blow to the stomach wall which causes a wave to run across the surface of its contents.

The stomach is normally in a state of tonic contraction so that when one lies down, the portion of the stomach over the vertebral column tends to empty and contract while the fundic portion accommodates an increased portion of the stomach contents.

In the erect position, the fundic portion of the stomach looks upward, not backward as stated by His and Cunningham. The surfaces are not up and down, but anterior and posterior, or anterosuperior and postero-inferior as we stand or lie down. The greater curvature is not higher but lower than the lesser. The lesser curvature does not become convex when the stomach is filled, filling being accommodated by distention of the greater curvature. The position of the incisura angularis, with reference to the pyloric valve, varies with the high or low position of the pyloric valve.

The normal position of the diaphragm is higher when one is in the horizontal, than when in the erect position. Not infrequently, contraction of the abdominal wall is accompanied by descent of the diaphragm. Though some females employ costal respiration almost entirely, as do some men, others show as great a swing of the diaphragm in normal respiration and as great extremes of movement of diaphragm in forced inspiration and expiration as is found in men.

DISCUSSION

Dr. A. M. Cole, Indianapolis: I had the pleasure of assisting Dr. Myers in this very admirable work. In the last few years I have examined a good many stomachs, normal and abnormal, and I think that the conclusions that can be drawn from the work of Dr. Myers have great value for the medical profession. In other words, we have to know the normal before we can know the abnormal. It is a curious thing that all during the past centuries we had an absolutely wrong conception of the normal stomach. Only after the advent of the Roentgen ray was it made possible to study the normal stomach and form a right conception of it. The text-book stomachs in text-books of the present follow the old idea of the stomach, and I fear that a great many practitioners to-day think of the normal stomach as being the stomach of text-book type. I can count on the fingers of one hand the text-book type of stomachs that I have found. So the question comes, what is the normal, and when do we have an

abnormal; when do we have a gastroptosis? That is a very large question, and I can only touch upon it.

I believe that there is a very gross misconception on the part of the average doctor concerning gastroptosis. In other words, he will palpate the stomach, and when he finds it dull he will at once conceive the idea that that is a gastroptosis, and attribute the patient's symptoms to that. Now we know that the normal stomach is at the umbilicus or below, so we will have to form a new idea of gastroptosis. What are we going to say? What figures are we going to use? Will we say a stomach is abnormal, or that we have a gastroptosis, when it is two inches below the umbilicus, or are we going to say we have a gastroptosis when the stomach lies on the pelvis? Personally, I am not a strong believer in gastroptosis. The Germans think there is no such thing as gastroptosis, and that if the stomach is lying low it belongs there. Oftentimes we know there is no room for it up where it belongs, especially in a female with a tight corset. I think we have stomachs abnormally low, but I believe they are comparatively rare.

In the first place, the majority of practitioners examine the stomach with the patient lying on the back. You saw this afternoon how the stomach, as a rule, with the patient on his back, gravitates to the left hypochondrium. The practitioner will go over that stomach and palpate it, and my experience teaches me that in nine cases out of ten he does not palpate the stomach, but probably gets the transverse colon. He is wrong, anyhow, because to get the normal stomach the patient must stand on his feet.

There are only two ways of knowing the true position of the stomach. First, inflate that stomach with air and palpate with the patient on his feet. In a great majority of cases this is sufficient; you will get the true position in a gross way. The other way of knowing the true position of the stomach is by the Roentgen-ray skiagram, or by fluoroscopic study. But I want to emphasize that the position is not so important; it is important in a way, but not so important as function. It is not the position of the stomach, but the way that stomach is performing its functions. I have studied dozens and dozens of stomachs with the greater curve lying upon the symphysis, and yet these stomachs were performing their function admirably. If a patient shows gastric symptoms the conclusion the average practitioner would jump to is the fact that the symptoms come from gastroptosis, when they are probably reflexes, as we know that a great majority of gastric symptoms are reflex. So do not jump to the conclusion that because you find the stomach down the symptoms are caused from the organ being down.

These cases must be studied, and we must not lose sight of function. If you find a stomach down, and it is performing its functions, the emptying time is normal, the chemistry is all right, you find no indications of organic disease, you must go still farther and find the cause of your patient's trouble.

Eight years ago Dr. A. B. Graham and I read a paper before this Association — a paper on gastroptosis. We were at that time just as wrongly informed as many practitioners are today. That was before the day of fluoroscopic study. We took our radiographs, and when we found the greater curvature falling below the umbilicus we thought we had a gastroptosis. So we presented our paper with our lantern-slide exhibits. But with fluoroscopic study we have a much better way of arriving at the question of whether we have an impaired function—not only impaired position, but impaired function. In studying these cases we see the stomach fill up. Dr. Myers showed you how the stomach should fill, from the top down. The normal stomach fills from the top down.

If on further study of these cases we find impaired peristalsis, which we often do in these flaccid stomachs; if, when we take into consideration the emptying time of the stomach, we find it empties, not in four hours or three hours, but in six hours or more, then we may rightly conclude that we have impaired function as well as impaired position.

This question of treatment is in a chaotic state. The old idea was to hitch all these stomachs up when they were found below where it was considered they should be. But this failed, and so operation after operation has been devised, and to-day no two surgeons agree as to how these stomachs should be treated surgically. The fact is that very few need surgical treatment. If we have a stomach in which the curvature is high, which empties very little of its contents in six or eight hours, this case may need surgery; but in a majority of cases the impaired position or impaired function can be cured by purely medical means. It is a question of building the patient up by putting him to bed. You show this patient how the stomach changes position, and how much easier it is for the ordinary stomach to empty itself when the patient is lying down. Put these patients to bed, give them forced feeding, do not starve them; have them in charge of a trained nurse, to give them massage. Build up their weight, and a great majority of these cases after they have taken on fifteen to twenty pounds in weight will get up and their gastric symptoms will have disappeared. And that sort of treatment is in reach of every practitioner. I want to emphasize the fact that in case we have malposition, not only of the stomach but of the abdominal contents in general, the majority of such cases are perfectly amenable to rational medical treatment.

Dr. Chauncey W. Dowden, West Baden: Personally, I am a great believer in gastroptosis. I do not believe that the fact that a stomach lying on the symphysis three or four inches below the umbilicus functionates normally, means that that stomach is in a normal position. The women you will see are nearly always very nervous, and in nearly all these low stomachs there is a mental defect of some description.

Quadrupeds have their mesenteric attachment springing from the spinal column. But for man. assuming an erect posture, Nature provided a stomach swinging between the esophagus and the first and second portions of the duodenum. The colon loses its mesentery and becomes largely a retroperitoneal organ, or is attached, and descending, loses its mesentery. That leaves, however, the transverse colon swinging between two points. In the processes of distention, radiation and fusion of the various bands and mesentery we have an omentum thrown out from the stomach overlapping the colon. Sometimes this does not occur, and the attachment of the stomach to the spinal column is not fastened, and we fail to get this added support of the stomach and colon; but in a great majority of cases we do get this omentum. Then we must come back to our old question of intestinal stasis, and in a large percentage of our cases of stasis the colon comes down and drags the stomach down with it.

It would be interesting if Dr. Myers could have followed this through and accounted for the time in passing through the intestinal canal. But notwithstanding this I do think we have cases of ptosis a great many more times than we account for by the developmental defects, where the general health is good. In view of this fact it has led such men as Abold, Stiler and Mattes to insist upon a congenital predisposition to general body weakness. In view of the recent knowledge we have gotten from anatomists and embryologists there is no use denying at this time that there is a predisposition to congenital weakness. You take good surgeons who are making a practice of examining the position of all the abdominal organs when they operate, and they will nearly all tell you that in every right-sided ptosis they find some developmental defect. So I should dislike to believe that a stomach four inches below the navel was in a normal position for that organ and that the patient was free from symptoms. A strong man, a well developed man, that carries 160 to 170 pounds of flesh, never has a stomach that far below. On the other hand, you never find these people who have such stomachs with an extra amount of fat, so we may safely say that ptosis and fat are not compatible. If you have fat, you do not have ptosis; and if you have ptosis you do not have fat. In my opinion this condition of ptosis is due in most cases to faulty development.

Dr. A. C. Kimberlin, Indianapolis: In the presentation of this subject Dr. Myers assumes a most enviable position by dealing strictly and alone with anatomical facts. It is this kind of presentation that appeals so to us who are engaged in general practice, and leads a man to say that if we are to enjoy a fair longevity and good health we must be very careful how we select our ancestors. This matter as presented by Dr. Myers carries weight from the viewpoint of heredity, pure and simple, and makes you ask yourself a good many questions. First of all, what percentage of people in a given community, regardless of age, suffer from these misplacements of their abdominal viscera? The next thing you ask is, what part has heredity played in this so-called deformity? The next question you ask yourself is, what influence—and this is the chief one as I gather from Dr. Myers' remarks—what influence has such position of the abdominal viscera on one's health? Then again, what are we to do with such subjects in the way of medical treatment, and, lastly, how amenable are they to surgical treatment. This last question is a vital one. And here again a man who is crowded, as most of us are in general practice, makes a short analysis of the situation in a conscientious way and believes that the conditions which have been so plainly illustrated by Dr. Myers are entirely correct and scientific, but he asks, is it possible for the surgeons to reclaim all these subjects to good health, and if we are to believe for one single minute all that has been shown by Dr. Myers' pictures, which primarily deal with facts, is it going to be possible?

When the abdomen is open it is exactly like looking into men's faces. They are all men alike, but no two look alike. A good many years ago it was my lot to do all the necropsies at the City Hospital. Dr. Taylor, who was our professor in anatomy, laid great stress on the fact that we should learn the topography of the abdomen, so much so that we were sure that one of the examination questions would be, name the different structures found in the different parts of the abdomen. But in doing these necropsies I was impressed with one thing, and that was that what we had learned about the abdominal viscera in the text-books, and what I saw on the post-mortem table, did not tally at all. That was more than twenty years ago, and I said to myself and to students, that if they would forget all about the topography of the abdomen they would make better clinicians. But do not forget the physiology of the intestinal tract. The whole intestinal tract constitutes one physiological unit, and it is not possible to study one part of this tract alone and come to any correct conclusions as to diagnosis and treatment. I refer particularly to the surgical side. We cannot determine—I am sure surgeons do not

agree among themselves—the truth in regard to the abdominal viscera, without taking into consideration other conditions. It is easy to say this is abnormal, or that is quite normal, but what one man calls normal may be pronounced abnormal by another—with respect to the same condition. Besides, I think we rarely ever should seriously approach this subject from the mechanical viewpoint pure and simple. I have had experience with indigestion myself, and I know what part diet plays, and sleep plays, and recreation plays in doing away with your symptoms. Janeway summed it up when he referred to the argument of the Germans in regard to malposition of the abdominal viscera. They insist it is purely an American condition, depending on the exhausted condition of the nerve centers; that we are foolish as to diet, that if we would only permit full diet we would get rid of this condition. Janeway said that he quite approved of what his German brethren said, but he had great difficulty in finding a German menu that would suit an American stomach. It is very hard to take a high-strung, sensitive, rather delicately constructed American and put him on a full, heavy diet.

We cannot forget in this matter that it is not alone a matter of malposition or of function, but we must take into consideration the circulation of these tissues—the splanchnic circulation, especially the arteries. Consequently while these cases are anatomic for all practical purposes, in another sense they are not anatomic at all. When you add the additional strain on the nerve fibers resulting from the misplacement of the abdominal viscera, you have a series of reflexes which can sometimes lead you very far astray, but which are easily enough restored when you replace the abdominal viscera in their normal position and relieve the strain. You relieve this nervous strain and balance the patient, restore the nerve tone, increase his elimination by making all this retarded arterial blood from the splanchnic circulation flow into the veins, and you will see his skin redden, his capillaries flush, and with increase in weight he takes a normal temperature.

This is too big a subject to discuss in the short time we have for it. But we are not in position yet to say that this case is suitable for surgical treatment, or this one will wear a support, or that one can be cured by adding a pad of fat in the abdominal wall.

Abdominal supports have their place when they are practicable, but so many cases have the viscera fixed in abnormal position by adhesions. It is surprising to see how many of these abdomens have various adhesions. Only last week I saw one in which the liver was almost in the pelvis. A support would only have added to the intensity of that patient's suffering.

Dr. Albert E. Sterne, Indianapolis: The Chair would like to take occasion to say a few words. I think the importance of the lesson which has been brought to us by both essayist and discussants is particularly that we should not come to the conclusion that we can treat these cases by any sort of routine treatment. Each case is a law unto itself, and has to be studied by itself. There has long been in the minds of a great many internists the conviction that we have gone too far in this matter of ptosis of the abdominal organs, no matter whether it be stomach, bowels or other viscera. The day is going to come when we will hear less talking about ptosis and more about atony.

As far as the organ itself is concerned, it does not matter what its position. If the motor force of the organ is good, the question of position is of comparatively little value, provided that the position of the organ does not create any mechanical interference with neighboring organs. That is equally true of the kidney as of these other organs, and in passing I may say that many a kidney which is high creates function quite as much as the kidney which is low. It is not a question of the posture of the kidney, so much as whether the ureter functionates. As I have repeatedly remarked, I am convinced more and more every year that we are dealing more with the anatomy of the organs than with their posture.

Furthermore, it is wrong to say that anyone suffers from chronic nervous indigestion. I contend there is no such thing as chronic nervous indigestion. Acute nervous indigestion, acute functional dyspepsia, is common. But chronic nervous conditions of that kind which are functional to my mind are extremely rare if they occur at all. If we have so-called nervous dyspepsia, there is something wrong inside of that belly, some interference in the function of the organs; but let me emphasize a fact which has been brought out here, that it is not good practice to make simple skiagrams of conditions of this kind. Skiagram plates can fool you and sometimes do more harm than good, because if a skiagram is made alone, without the assistance of screening fluoroscopic work, it can lead to very wrong classification. Let me illustrate: Supposing we have the large bowel, or any tract of that kind—not regarding the peristaltic wave. The peristaltic wave, if you watch it, will disappear; a constriction in any part of the bowel will disappear; on the other hand, an adhesion—the structure— at any point will remain. Now if we fill this bowel with bismuth and take a plate, we cannot see anything except that the bismuth is there (illustrates remarks on blackboard). So I believe in the necessity of adding careful screening and fluoroscopic work to the plating of these subjects.

We see a great many of these cases. They come on account of symptoms that have been

mentioned here, especially from the side of the nervous system, and we have invariably found that where the element of chronicity is revealed there is something wrong inside of the abdomen, but that it is not a question of ptosis, although ptosis may be present and may in some instances be important on account of atony of the organ; but it is a question of function, a question of force, and these patients suffer far more from physiologic anemia than from anatomic deformity.

Dr. Chas. S. Bond, Richmond: I have been very highly entertained by this paper of Dr. Myers, but I should like to see these patients turned upside down and photographs taken of their stomachs. That would be an exceedingly interesting proposition, and it would develop what everyone here knows, that ptosis is a matter of adhesions, and turning these patients upside down would develop the fact that the bowels have a polar motion, therefore would do away with the notion that the stomach was held down, as in case of ptosis.

I am just wondering what a good many surgeons would say about this paper. We have spent a good deal of energy in the last few years developing the surgery of these cases, and I think this is a very appropriate subject. Either the theory of these operations that we have performed has been wrong, or else the whole subject is in a state of chaos at this time. Of course the bismuth preparation, or anybody eating a full meal, will have weight. A little while ago I made a post-mortem of a patient who had had trouble with his stomach for a long time, and the post-mortem developed that the pyloric end of the stomach was higher than the cardiac end, and in the matter of peristalsis it was a race whether the food should reach the mouth before it reached the pylorus, and the man very often had regurgitation of food, especially when lying down. So that the emphasis which has been given to the function of the organ I think is well taken, and I think is really all we need to pay attention to. If a man had a straight gut with no stomach, then there would be no interference with the function. The stomach is just a sack for the purpose of retaining the food for a length of time, and if we could get chemicals in there which decompose the food it could be done lower down, so that these organs are not absolutely necessary, and we cannot claim that the stomach plays an important rôle in these cases of ptosis. There is a certain amount of stasis in the abdominal cavity, and by lying on the stomach you produce a peristalsis and get rid of some of that. This is seen in young children with the stomach ache.

The stomach is responsible largely for these conditions in the lower part of the bowel, and I think the advice that a patient having stomach trouble can eat all sorts of food is all foolishness. The stomach digests starches and sugars, but if we fill up with gases and acids of different kinds, the gases dilate the stomach and press the contents down, and while the stomach is not absolutely necessary, it does drag the other organs down. It is my opinion—and I think Dr. Cole made a very good explanation of this subject—that the matter of ptosis, if we have function, amounts to very little. I believe I will take the German view of that matter, that if a person has any amount of ptosis, even were the stomach lying in the pelvis, if it is able to perform the functions of digestion, he can still maintain himself in a normal way with reference to food. And the other things which occur to these patients are very often misconstrued. They may have some form of indigestion, but more than likely some form of neurosis from some other source, as Dr. Kimberlin said.

This question would take a good deal of time to go into seriously, and I want to congratulate Dr. Myers for this excellent piece of work.

Dr. Myers (closing): I was a little panicky when I was told I had only twenty minutes for my paper, so I presented it hurriedly. But I certainly want to thank Dr. Cole, not only for the use of his apparatus in his office, but for his help in safeguarding the Roentgen-ray work, preventing burns or anything of that sort.

I do not know as I made it as clear as I should have that the greatest number of these cases occurred in absolutely normal individuals. These were not patients; not one of them suffered from stomach trouble; they were all normal individuals. The men were medical students and the girls were nurses, college students, athletic directors—a number of the girls did not wear corsets at all.

The special interest of this subject comes from the question of ptosis. What is ptosis? If in only one of these twenty-nine men, the lower border of the stomach was found to be more than one inch below the umbilicus, what is ptosis in the male? If of these women the average stomach was only three inches below the umbilical plane, then what is ptosis? I do not know. But I think when we present these normal conditions it is up to you practitioners to find out. Why these pictures? Because the stomach has been described as it has been found in the dissecting room, the necropsy, and the surgery, with the patient lying on his back. I believe that if we do have a ptosis—which is probable in my mind—that loss of tone has a great deal to do with the position of that stomach.

We usually have an idea that the pyloric portion of the stomach is a fixed point. It is not. There is movement of the pyloric portion, there is movement of the cardiac portion, and as the diaphragm moves up and down there sometimes is a four-inch swing.

I have taken more than my allotted time with this presentation. I thank you all.

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EDITORIALS

THE NEW "WAR" ANTISEPTIC

Within the past few months indefinite announcements have appeared in the lay press concerning a new "wonderful" antiseptic that is supposed to have been discovered by the world-famed Dr. Carrel who is ministering to the wounded in one of the French hospitals. Naturally the medical profession has taken an unusual interest in these announcements and has waited patiently for some definite authentic information.

Some of the facts with reference to this new antiseptic are gradually becoming known. The active germicidal ingredient of this antiseptic is calcium hypochlorite, known popularly as chlorinated lime. A Professor Cohen, of England, is said to have elaborated the method of preparing this antiseptic in liquid form; Dr. Dakin, of New York, is credited with having established the bacteriologic data bearing upon it, and Dr. Carrel is said to be the one responsible for its application in war surgery. The antiseptic solution is prepared as follows: To a solution of chlorinated lime is added sodium carbonate and the mixture vigorously shaken. The supernatant fluid is siphoned off and filtered, and to the clear liquid thus obtained is added enough boric acid to make the solution neutral or faintly acid. Experimentally this solution was found to kill such germs as staphylococci in two hours. A group of men in the University of Edinburgh is credited with having elaborated a dry antiseptic containing the same active germicide. It is prepared by grinding chlorinated lime into a fine powder and mixing with it an equal amount by weight of boric acid.

The use of a chemical of this sort for germicidal purposes is not really entirely new. Chlorinated lime has long been recognized as an efficient disinfectant, but because of its marked alkalinity its corrosive and destructive action on living tissues was such that it could not be used in clinical work. By these new methods, however, the mixture or solution is rendered neutral or nearly so, and it thus becomes non-irritating to the tissues. Moreover, the germicidal activity of the chlorinated lime seems to be increased by treating it in the way just described.

These meager facts do not justify a definite opinion to be formed as yet. From the available reports the impression is left that an efficient antiseptic especially adapted for use on the battlefield has been found and is being used apparently with the success expected of it. The medical world will wait for further reports on the use of this antiseptic, trusting that the early hopes of its potency will be borne out in the experience with it in the present war.

SUMMER RESORT TYPHOID

Of the many phases of the typhoid problem, one that commands our sincerest attention is the prevention of typhoid fever in our summer vacation resorts, especially the lake resorts. Much attention already has been devoted to that subject, but the problem demands much more than it has yet received. So far as our own state is concerned it is quite evident that our method of dealing with this public health matter is subject to criticism and condemnation, for not a summer goes by without an epidemic of typhoid fever breaking out in one or more of those resorts. When the epidemic breaks out there is an immediate stir of health officers—local, state, and often even federal officials—to locate the source of the infection and eliminate it, but then the damage has already been done. The stable is locked after the horse is gone. Why is such a state of affairs tolerated?

Typhoid epidemics occur either because our summer resorts are not properly inspected, or because the rules laid down by our health officers are deliberately disregarded, or both. The whole trouble is with our present system of administering the public health. Our methods in general are too lax. We do not demand of our county health officers that they have the special training in hygiene and sanitation necessary for the efficient administration of their duties, nor do we require them to give all of their attention to their public health work. Not until there will be a recognition of our public health service, i. e., not until we shall have in

every county and city trained, full-time health officers can we expect results better than what we are getting now. The sooner we realize that and act accordingly just so much sooner will we be able to carry out effectively our cherished ideal of prevention of disease.

In a summer colony the resorters are very apt to disregard to a certain extent some of the important principles of hygiene. At home living conditions are such that practically all of their needs have been arranged for them, but in their temporary summer abodes things are different. Here they are left more or less to their resources, and either because of ignorance or indifference the tendency is toward carelessness. Under such conditions it is of vital importance for such a community to have its hygienic needs properly regulated and supervised. Such problems as the disposal of sewage and all refuse, the abolition of the use of privy vaults, etc., must be settled for them by the local health authorities. Their water—not only that used for drinking but that used for all other purposes—must be kept absolutely free from contamination. They should be provided also with milk that is at least of as high a standard bacteriologically as they get at home. To either the water supply or the milk supply may be traced the vast majority—if not all—of these typhoid epidemics, so that by establishing a supply of good water and insuring a supply of pure milk we ought to be able to solve the problem of summer resort typhoid.

MEDICAL FEES AND THE WORKMEN'S COMPENSATION LAW

The attention of the members of the Indiana State Medical Association is called to the question of compensation for injuries that come under the provisions of the Indiana Compensation Law which recently went into effect. Henceforth every employer of labor is liable for the fees of a physician for the care of injured employees, and this has led employers to take out liability insurance which covers all expenses, including medical attendance, occurring in connection with accident cases. This is all very well except for the fact that the insurance companies are coming forward with a schedule of ridiculously low fees which they offer for any and all medical or surgical services rendered injured workmen, and they are asking physicians to agree to accept such schedule, often making the statement that all injury cases will be referred to those physicians who accept the schedule.

We desire to warn all physicians that this is a scheme for securing medical and surgical services at rates that are far below even the lowest charges that usually are made by reputable physicians for such services. We feel sure that none of the better class of physicians will accept any such schedule of fees as has been offered, though in all probability there will be a few doctors willing to take work at any price in order to get it, and who will cast self-respect to the winds by accepting some such contracts as now are being offered. If the scheme works out as the insurance companies expect, it means that the injured workman will not have the right to select his own physician, and in many instances will suffer the penalty of being cared for by the incompetent.

What the medical men of Indiana should do is to insist that the compensation for medical or surgical attention for injuries which come within the provisions of the Workmen's Compensation Act shall be the same as the compensation prevailing in the locality where the injury occurred, for similar services in any other cases. Furthermore, the injured workmen should not be compelled to submit to services by a cheap doctor who generally is an incompetent one, and employers of labor also should be interested in the selection of service for their employees which possesses quality rather than cheapness.

Unless the medical profession stands out for its just dues in connection with the operation of the Workmen's Compensation Act we shall see the insurance companies not only dictating the terms under which any compensation will be granted, but the fees awarded for services rendered will be so ridiculously small as to make us blush for shame in accepting them. It is not the employers of labor that we have to fight, but the insurance companies, and every doctor who desires to maintain his self-respect will insist that the insurance companies shall pay what individuals pay for medical and surgical services. A schedule of fees that is fair and just for the physician and for the private patient, is fair and just for an insurance company.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

The attendance at the Indianapolis session was especially gratifying. The official register showed 646 names, but the Secretary reports that at least 100 physicians who were entitled to register did not do so from one cause or another. He is under the impression that a complete list of the members of the Association who attended the session would number at least 750.

Fort Wayne has acted as host to the Association on several different occasions and performed the work creditably. It, therefore, goes without saying that the next session of the Association, which will be held at Fort Wayne the last week in September, 1916, will be as successful as any of the preceding Fort Wayne sessions. Already plans are being made by the Fort Wayne medical profession.

It may not be amiss to remind doctors who desire to use a stereopticon in illustrating papers that are to be presented before any medical society that it is wise to make arrangements for the stereopticon in advance so as to avoid disappointment or perhaps inefficient service if application for the stereopticon is made at the last moment. Several of the essayists at the Indianapolis session who used a stereopticon never made a request for the stereopticon until after reaching Indianapolis, and this gave the Committee on Arrangements no end of trouble.

It is to be regretted that many of the members attending the annual session do not take the trouble to fill out the registration blanks. In the first place, a count of their cards is the only means we have for registering the attendance, and consequently we cannot get the credit for as large a crowd as we really have. As nearly as could be guessed there were actually 750 members present at Indianapolis, although but 646 registered. In the second place, this scheme furnishes the secretary with an annual check on the spelling of names and correct addresses for mailing The Journal. The little slips are then filed permanently so that at any future time it can be ascertained whether or not a member was present at a given session.

To endorse some of the work of the Indiana Board of Medical Registration and Examination is quite within the realms of reason, but to endorse all of the work, including some of the inconsistencies, unfairness and lack of judgment exhibited by the board would stamp us as willing to place the seal of approval upon anything, whether good, bad, or indifferent. Accordingly, the Association was quite wise when it refused to give the board a clean bill of health and to appropriate money to help the board fight all of its battles, some of which are rather unworthy.

A correspondent calls our attention to a feature in connection with the issuance of insurance policies to Christian Scientists which seems to us is worthy of some consideration. It stands to reason that individuals who will not seek help in early affections of the heart, lungs or kidneys will allow their condition to go on until they are beyond help. As a result, the rest of the policy holders have to suffer for it. Therefore, why issue life insurance policies to Christian Science believers unless the granting of the policy is dependent upon the employment of medical help in time of need?

Dr. Kemper, Historian for the Indiana State Medical Association, asks that every county medical society shall be represented in the medical history of the state which will form a part of the work that is being undertaken by the Indiana Historical Commission that is planning for the centennial celebration to be held in 1916. Each county society is urged to select an historian to prepare a medical history of his county. Full details concerning the work required may be obtained by writing Dr. Kemper, whose appeal appears in the Correspondence Department of this number of The Journal.

It is reported that a few cocain fiends at Indianapolis and other cities in the state are obtaining cocain through the medium of prescriptions received from physicians, and later forged in order to duplicate the supply. This leads us to remark that no physician should be guilty of writing a prescription for cocain under any circumstances, for cocain never was and never will be a therapeutic agent, and therefore there is no reason for writing a prescription for it. The physician who writes a prescription for cocain stamps himself as either ignorant of the legitimate uses for cocain, or is catering to cocain habitues.

Dr. Charles C. Bass, New Orleans, delivered an address at the Indianapolis session on the subject, "The Relation of Endamebae to Alveolar-Dental Pyorrhea." The address is published in this number of The Journal. In it is reiterated much that Dr. Bass has included in his book entitled "Alveolar-Dental Pyorrhea." Now comes *The Jour. A. M. A.* of October 2 with a review of Dr. Bass' book in which the theory that pyorrhea is caused by endamebae, and that emetin hydrochlorid is a specific for this disease, is given a hard rap. The reviewer is not in sympathy with the theory as to the causation of the disease or the remedy for it as advocated by Dr. Bass. Thus does the march of scientific progress meet with obstacles.

Essayists who presented papers at the Indianapolis session of the Association are reminded that "All papers read before the Association or any section of the Association, shall become its property." (Section 2, Chapter 10 of the By-Laws.) Therefore, no essayist has a right to publish his paper in any other than The Journal, the official organ of the Association. Attention is called to this matter because of a few misunderstandings in past years, and the establishment, by the Council, of a rule based on the by-law already quoted, which is as follows: "Original papers are accepted for publication in The Journal on the distinct understanding that they are contributed solely to The Journal. No objection will be made to republication of the article if due credit is given to The Journal."

The Indianapolis session of the Association was a great success. Much credit is due the Committee on Arrangements as well as the President, Dr. Frank B. Wynn, and the Scientific Committee. The Indianapolis physicians also were most hospitable. The papers and addresses were excellent and the social entertainment all that could be desired. The banquet was especially noteworthy because of the attendance and the rare treat afforded in the addresses by Drs. Mayo, Rosenow, and Bass. The scientific demonstrations at the college building, prepared at considerable effort, were very instructive and greatly appreciated. The section work was of a high standard of excellency. In fact, everything went off smoothly and creditably. No session of previous years can be said to have been more generally satisfactory in all respects.

As an evidence that doctors are prone to put off doing that which they should do, and do promptly, we call attention to the serious annoyance occasioned by the failure of those in attendance at the Indianapolis session to register for the evening banquet, even when certain of attendance. The local committee on arrangements had become responsible for three hundred plates, but up to about two hours prior to the hour for the banquet only one hundred and fifty doctors had purchased tickets or signified intention of attending. At the last minute tickets to the number of nearly five hundred were sold, and in consequence of the late decision of so many, the committee on arrangements and the hotel management found themselves seriously inconvenienced. Probably not 1 per cent. of those who attended the banquet could truthfully say that decision to attend the banquet had been made at a late hour. Just why the tickets were not purchased at the time of registration is perhaps sufficiently explained by saying that the banquet was for doctors, and they put off everything until the last moment.

At the present time a very large number of Indiana newspapers are carrying reading notices concerning the reputed efficacy of treatment offered by various cults that hold themselves out ready to cure suffering humanity. Among these are articles from Christian Scientists, osteopaths, chiropractors, and other less prominent pretenders. That this sort of publicity has its effect in securing converts or supporters cannot be doubted, and a point evidently not lost sight of by advertisers is the probable support given by the public press as a direct result of the income secured, for it is well known that the difficulty encountered in suppressing the manufacture and sale of fraudulent patent medicines and in putting notorious quacks out of existence has been due to the obstinacy on the part of newspapers to part with the income derived from the advertising patronage of these frauds. But the point to be made is that the regular medical profession owes a duty to the public in pointing out the truth concerning many abnormal conditions of health and in correcting some of the inconsistencies in the specious arguments put forth by pretenders. Herein lies a great work for the publication committees of our local societies, for without exercising any spirit of antagonism, it is possible to carry on a campaign of education which will have its effect in acquainting the public with facts which are worthy of acceptance by every intelligent person.

The members of the Association will be very much pleased with the suggestion made by the House of Delegates that the incoming president of the Association continue the committees on investigation appointed by President Wynn. We wish to urge that the committees begin their work at once and give their several subjects earnest and continued attention up to the time when they should make their final reports for publication in The Journal just prior to the Fort Wayne session. The Committee on Physicians' Welfare might well be a permanent committee, for it could accomplish a great deal of good in investigating the conditions that make for good or harm to physicians in the various communities in the state. By all means let us have the cooperation of every member of the Association in making the work of these committees representative of conditions as they actually exist. To analyze the results secured from the replies of but a limited number of physicians does not mean much, and there is no reason why the committee should not have the assistance of every member of the Association in making this work productive of much good to the profession.

It is a little amusing to the Editor of The Journal to note that one of the committees of the Association offers advice as to the manner of doing away with untruthful, deceptive, or misleading statements concerning nostrum and quack doctor advertising in the lay press. Would it not be appropriate for the committee to say something about the untruthful, deceptive, and misleading statements in advertising that is found in many of the medical journals published in this country? We better clean our own houses before asking others to clean theirs. As a matter of fact there are many leaders among the lay publications that are refusing all sorts of nostrum and quack doctor advertising. Compare this action, if you please, with that of a large number of leading medical journals whose advertising pages are positively rotten because of the deception and fraud contained therein which are tolerated by the editors for the sake of the income derived therefrom. If doctors would have the courage of their convictions and refuse to subscribe for or accept medical journals until the advertising pages are free from nostrum advertising this whole question would be settled very promptly, and we then could go to the lay publications with good grace and ask them to rid their pages of objectionable medical advertising.

It is unfortunate that the questions propounded to the members of the Indiana State Medical Association by the several investigating committees appointed by President Wynn were sent out so late that it was impossible to secure full returns and a proper analysis of the results. To secure but 300 replies from nearly 3,000 inquiries shows that but a limited percentage of the profession of the state is represented in the opinions that have been expressed, and in consequence the findings of the several committees are not especially valuable except as being significant of what possibly might be the results had everyone responded to the requests that were made. The work that was undertaken is worthy of continuation, and if any good is to come from the effort there should be a more liberal response from the membership of the Association. The Journal can materially assist in carrying on the investigations by publishing the questions and the invitation of the committee to respond promptly in order that a proper interpretation of the findings may be given to the Association for such action as seems advisable. Some good ought to come from an investigation of the various conditions under which a physician works and the problems with which the medical profession is interested.

The report of the Association's Committee to Study Quackery and the Nostrum Evil calls attention to some facts that have been referred to repeatedly in The Journal. For instance, it has been found that a very large number of Indiana physicians are guilty of prescribing worthless and semi-worthless proprietary preparations, and in not a few instances are guilty of prescribing nostrums the composition of which is unknown. Undoubtedly a large proportion of these offenders are prompted to do what they are doing in consequence of the influence upon them by specious advertising carried in certain medical journals that should be in better business than helping to exploit manufacturers of fraudulent preparations. Another class of physicians are of the gullible type who listen to the pleas of the smooth talking detail man. As the report of the Association's committee well says, a safe guide to the value of proprietary preparations is their acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. No doctor should be guilty of prescribing any preparation the exact nature of which is unknown to himself. Furthermore, there is absolutely no excuse for

the prescribing of any but U. S. P. or N. F. preparations, and whenever a physician is tempted to prescribe a proprietary preparation he should make sure that that preparation has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. In no other way are the interests of the patient and the best interests as well as the reputation of the physician protected.

The report of the Association's Committee for the Study of the Problem of Criminal Abortion is rather interesting in connection with the suggestions made for lessening the evil. We cannot endorse the sentiment expressed by a few physicians that where the family is large, five to eight children, and the parents poor, abortion may be morally justified. Abortion is never justified unless it be in those rare cases where it may be indicated for the purpose of saving the mother's life. To sacrifice one life that is a certainty for a life that is an uncertainty is a questionable moral procedure. It is quite probable that as long as the world stands and the present social status exists there will be applicants for abortion, and those who will do the work. Statistics seem to show that by far the greater number of those who seek abortion belong not only to the married class but to the poor who wish to avoid the drawbacks of a large family. All things considered, we are constrained to believe that education concerning prevention of conception is worthy of some consideration, and the present agitation of that subject in the lay press is worthy of something more than the bitter condemnation given it by our purists. We must remember that the ideal is seldom obtained, and oftentimes we are forced to accept measures which, while not entirely remedial and not always subject to the highest degree of approval, are the best obtainable under the conditions existing. It also should be remembered that education of whatever kind should be along approved lines, and if we are to lessen the number of cases of criminal abortion by educational measures which tend to prevent the occasion for an abortion, then we must see to it that the education does not swing the pendulum to the other side and do more harm than good. The problem is one that will tax our sociologists as well as the members of the medical profession, and there always will be those who will not be satisfied with the manner in which the problem is attacked.

A great deal of newspaper criticism has been directed against the Robert W. Long Hospital for alleged refusal to accept a colored patient sent in from Greencastle as an indigent patient, and reported as worthy of the charity of the hospital. As usual, the whole thing is a "tempest in a teapot," but it may not be amiss to call the attention of the disturbers to the fact that even a charity hospital has the legal right to say when and under what conditions indigent patients shall be received, and it would seem that when it comes to the question of referring colored patients to a hospital for attention it would be wise to find out whether provisions have been made for the care of such patients and under what conditions they are given attention. No fair minded person desires to prevent colored people from obtaining proper treatment and care when sick or injured, but we also believe that fair minded people consider it entirely proper to refuse to place colored patients among white patients if they seriously object to such an intermingling. On the other hand, colored patients probably would be better satisfied to be given accommodations along with others of their race, and especially when the accommodations and the attention given to colored patients is in every way equal to the accommodations and attention given to white patients. It is all very well to talk about freedom and equal rights, but as a matter of fact there always has been and always will be a social distinction between the white and colored races, and any effort to break down this distinction will fail. We make ample provisions for the colored race in all our public and semi-public institutions, but as a usual thing it is deemed quite sufficient to segregate the colored people. That is what should be done, and probably will be done at the Robert W. Long Hospital, and if there has been any refusal to accept a colored patient at that hospital it probably has been due to temporary lack of accommodations for the colored race.

The Fort Wayne Medical Society does not look with favor upon the attempt of insurance companies to secure medical and surgical services in connection with the Indiana Workmen's Compensation Act for considerable less than the customary charges made by doctors for such services in the locality where the injury occurs. A committee appointed to investigate the matter and to report to the society presents the following:

An investigation of the fee bills issued by a number of indemnity companies, and especially pertaining

to injuries coming under the provisions of the Indiana Workmen's Compensation Act, shows that there is a decided tendency to make the amounts paid for services rendered less than the usual charges prevailing in this community. Without question this is an attempt on the part of the indemnity companies to determine the medical and surgical fees to be paid in injury cases, and for the most part the fees offered are low as compared to the prevailing standard in this community. This, we believe, will prove deleterious because it will result in mediocre service to the injured. For this reason the committee recommends the adoption of the following resolution:

The members of the Fort Wayne Medical Society believe that insurance companies, acting under the Indiana Workmen's Compensation Law, should pay for medical and surgical services in compliance with the law which reads as follows: "Section 26. The pecuniary liability of the employer for medical, surgical and hospital services herein required shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living when such treatment is paid for by the injured person."

The resolution was unanimously adopted by the Fort Wayne Medical Society at the regular meeting of Oct. 12, 1915. The adoption of this resolution in effect advises against any member of the society signing any fee bill that does not meet the requirements of the law in respect to the amounts paid for services. In other words, members of the Fort Wayne medical profession believe that the prevailing fees in and about the city of Fort Wayne for medical and surgical services rendered to private patients are the fees that should be paid by the insurance companies for services rendered in those cases that come under the Indiana Workmen's Compensation law.

DEATHS

Almond S. Farrington, M.D., died at his home in Waterloo, aged 83 years.

Mary A. Pifer, 80 years of age, widow of Dr. William H. Pifer, died at Lafayette recently.

Richard Bosworth, M.D., died August 31, at his home in Winchester, at the age of 83 years.

David N. Buley, M.D., formerly of Vincennes, died September 14 at his home at Crandall, aged 60 years. Immediate cause of death was paralysis. He was a member of the Indiana State Medical Association.

Carl N. McCaslin, M.D., of Earl Park, died September 17 at a hospital in Chicago, from peritonitis, aged 39 years.

Silas Pierce, M.D., died September 18 at Chesterfield, aged 77 years. He was a graduate of Harvard Medical School and a veteran of the Civil War.

Albert G. Coyner, M.D., of Kendallville, ended his life September 4, at the age of 51 years, after twenty-six years of practice at that place. He was a member of the Noble County Medical Society and the Indiana State Medical Association.

John R. Moore, M.D., died at his home in Greenfield, September 13, aged 54 years. Dr. Moore had not actively engaged in the practice of medicine for the past seven years, but was connected with the Greenfield Banking Company.

Theodore H. Taylor, M.D., of Evansville, died at the home of his brother at Richland, Ind., September 4, aged 63 years. He was born Sept. 24, 1852, at Boonville, and commenced the practice of medicine at Evansville immediately after his graduation. He was a member of the Indiana State Medical Association and the American Medical Association.

Aquilla A. Washburn, M.D., of Clinton, died September 16, aged 57 years. He graduated from Jefferson Medical College, Philadelphia, in 1881, practiced medicine one year with Dr. E. B. Evans at Greencastle, going from there to Atwood, and later entering the drug business at Tuscola. He located at Clinton in 1893 and since that time has built up a large practice at that place, including the office of physician and surgeon for the coal mines in and around Clinton. He was a member of the Indiana State Medical Association.

Walker A. Schell, M.D., prominent physician of Terre Haute, died September 13 following a very short illness. Dr. Schell was born at Spencer, Ind., graduated from the local schools and from DePauw University, entered the Miami Medical College and later graduated in medicine from the University of Michigan. After two years of study in Vienna and Berlin he located at Spencer, and a few years later removed to Terre Haute where he has practiced

for the past twenty-five years. In Dr. Schell's death, Indiana loses one of her most eminent professional men and a good citizen. He was ex-president of the Indiana State Medical Association, ex-president of the Vigo County Medical Society, and a fellow of the American Medical Association. He was 58 years of age.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Drs. T. H. and W. F. Walsh have returned from a two months' stay in Alaska.

Dr. and Mrs. John Kolmer and daughter, Elizabeth, have been spending several weeks in Atlantic City, Philadelphia and Baltimore.

Dr. H. G. Morgan, city sanitarian, attended the convention of the American Public Health Association held recently at Rochester, N. Y.

Dr. Samuel E. Earp is located in new office rooms, Nos. 633-634 Occidental Building, at the southeast corner of Washington and Illinois Streets.

The open-air school for tuberculous children opened this fall with fifty pupils. Two new sleeping porches and a new dining room have been added to the building.

The present enrollment of the Medical Department of the University consists of 155 students divided as follows: 46 freshmen who take the first year at Bloomington, 37 sophomores, 40 juniors and 32 seniors.

The thirteenth annual convention of the Indiana State Nurses' Association met September 29 at the Deaconess Hospital, Indianapolis. Problems of practical interest to the nurse were discussed. The officers for the past year were: President, Miss I. J. McCaslin; Treasurer, Miss Francess M. Mott; Secretary, Miss Ina M. Gaskill.

The Social Service department with Miss Henry as head and five assistants has moved from its old quarters at the College Building to the Robert W. Long Hospital. The object of this move is to extend the activities of the department to out state patients, whereas heretofore most of the time has been devoted to Marion County.

GENERAL

Dr. A. Malmstone has recently opened an office at Griffith.

A son was born on September 23 to Dr. and Mrs. L. O. Sholty, of Wabash.

September 25 was observed as "Tag Day" by St. Joseph Hospital, South Bend.

Dr. M. F. Parrish of Monroe has been appointed physician for the poor of that city.

Dr. C. F. Smith of Tipton was married September 18 to Dr. Christine Lukas of Evanston, Ill.

October 2 was observed as Tag Day for the benefit of the Schneck Memorial Hospital at Seymour.

Dr. William C. Coleman of Rushville was married September 8 to Miss Lillian Righter of Carthage.

Dr. J. G. Walthall, formerly of Benkelman, Neb., has located at Gas City for the practice of medicine.

Dr. H. M. Mulliken of Terre Haute was married to Miss Laura Fisher at Long Beach. Calif., on September 2.

Dr. L. H. Simmons, graduate of the Medical Department, University of Illinois, 1913, has located at Millersburg.

Dr. O. P. M. Ford of Connersville has purchased the practice of Dr. F. H. Harris at Rising Sun and located there.

Dr. F. H. Beeler has been appointed secretary of the Clinton Board of Health to succeed the late Dr. A. A. Washburn.

Dr. D. C. Peters of Greentown recently underwent an operation at the Good Samaritan Hospital, Kokomo. He is improving.

Dr. Sidney Walters, formerly of New Paris and Goshen, but now of Chicago, fell dead on the streets of that city, September 14.

Miss Ida McCaslin of Logansport was reelected president of the Indiana State Nurses' Association at their recent meeting at Indianapolis.

Dr. Edgar C. Demy of Linton and Miss Gertrude Hutchens, special nurse at the City Hospital, Indianapolis, were married September 9 at Indianapolis.

Dr. Harry Aldrich, graduate of Indiana University School of Medicine, and who has been doing hospital work in Indianapolis, has located at Fairmount.

Dr. Samuel R. Turner, formerly of Batavia, Mich., has located at Highland for the practice of medicine. Dr. Turner was located at Hammond several years ago.

Dr. E. R. Zimmerman of Elkhart was married on September 19 to Miss Orpha Hartman, who has been a nurse at the Elkhart Hospital for the past three years.

Dr. George W. Willeford and wife of Washington are taking an extended trip through the West, including St. Louis, Little Rock, Ark., and various points in California.

Dr. R. H. Kyte, who has practiced medicine in Jackson County since 1881, and who has been twenty-one years in Seymour, has gone to Montana for residence. He was at one time mayor of Seymour.

Dr. John B. Weever has retired from active practice of medicine after twenty-eight years practice at Mt. Vernon and twenty-nine years at Evansville. He will reside with his son at Nashville, Tenn.

Doctors S. J. Young, G. H. Stoner, H. B. Hayward, E. H. Powell, G. R. Douglas and R. D. Blount of Valparaiso have formed an organization by which they will be associated in the practice of their profession.

At the recent meeting of the Second Councillor District the following officers were elected: president, J. W. Strange, Loogootee; vice president, Charles Stone, Shoals; secretary, T. A. Hays, Burns City; councillor, J. B. Maple, Shelburn.

Dr. Maurice R. Lohman, recently graduated from the Medical Department of the University of Michigan and associated in practice with Dr. Maurice I. Rosenthal of Fort Wayne, was married October 10 to Miss Bernice Bippus of Huntington.

A reception was recently tendered Dr. H. L. Iddings, who is retiring after thirty-three years of active practice at Merrillville. The reception was arranged by the Lake County Medical Society and friends of the doctor, and was a most delightful occasion.

Dr. H. O. Williams has been appointed secretary of the Kendallville Board of Health to take the place of the late Dr. A. G. Coyner, who had served the board as secretary for the past twenty years. Dr. Williams' place on the board will be filled by Dr. C. A. Gardner.

Dr. B. W. Egan has sold his practice at Wheeling to Dr. W. J. Mellinger, of Indianapolis. Dr. Egan has gone to Chicago to do some postgraduate work, and will later go to New York City where he will take a course in diseases of the eye, ear, nose and throat.

The American Association of Obstetricians and Gynecologists met in their twenty-eighth annual session at Pittsburgh the middle of September. Indianapolis was chosen for the meeting place next year, and Dr. H. O. Pantzer of Indianapolis was elected president. Dr. O. G. Pfaff of Indianapolis was elected vice president, and Dr. Miles F. Porter of Fort Wayne was elected a member of the executive committee.

To those desiring to enter the Medical Corps of the U. S. Navy it is announced that the next examination will be held Nov. 15, 1915, at Washington, D. C., Boston, New York, Philadelphia, Norfolk, Charleston, Chicago, Mare Island, Calif., and Puget Sound, Wash. The first examination is for appointment as assistant surgeon in the Medical Reserve Corps, which pays a salary of $2,000 per annum, with allowances for quarters, heat and light. For full information write Surgeon General of the Navy, Navy Department, Washington, D. C.

Here is a hot one for the smokers! In a meeting of the Non-Smokers' Protective League of America, held in San Francisco, the president of that organization, a mere man, strange to say, asserted that "a smoker thinks more of his cigar or his pipe than of his wife," and accordingly advised all young women engaged to young men with the tobacco habit to break with them. He also asserted that "no woman can afford to occupy the same room with a man who smokes. A wife, for the good of future generations should insist on her husband living by himself

in another part of the house. I am in favor of every wife forcing her husband to smoke on the back doorstep. He should not be allowed to smoke in the house. If we don't stop this smoking business our jails are going to be overcrowded." And the Lord lets such fanatics live!

The second annual observance of Disease Prevention Day in Indiana was celebrated generally throughout the state on October 1, but the principal demonstration was in Indianapolis where a magnificent parade of unique and significant floats was viewed by thousands of people. The truths so long and vigorously advocated by Dr. Hurty had a prominent place in the parade in the floats designed and shown by the State Board of Health. A huge artificial fly, a hideous looking rat, and other disease carrying animals were a part of the State Board's showing. The fly was "quoted" as saying, "Me for typhoid," as it made its disease-carrying way from a dump heap to a residence. The floats of the Indianapolis Board of Health showed a skeleton labeled "Disease" locked in a cell with "Sanitation" and "Hygiene" guarding outside.

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Cutter Laboratory. — Anti-Pneumococcic Serum: Syringes 10 c.c. Diphtheria Antitoxin Globulin: Syringes 2,000, 3,000, 4,000, 5,000 and 10,000 units each. Normal Serum (from the horse): Syringes 10 c.c. Tetanus Antitoxin: Syringes 10 c.c.

Hoffmann-La Roche Chemical Works.—Imido, Roche: Ampules Imido Roche.

H. K. Mulford Co.—Mercurialized Serum, Mulford: Mercurialized Serum Nos. 1, 2, 3, 4, 5, 6.

Schieffelin and Co. — Radio-Rem: Outfit No. 4.

Standard Oil Co. of California.—Calol Liquid Petrolatum, heavy.

Morgenstern and Co.—The Council has recognized Morgenstern and Co. as selling agent for Dolomol and the Dolomol preparations in New and Nonofficial Remedies. The Council is assured that these preparations will be marketed in accordance with its rules.

White Chemical Co.—The Council has recognized the White Chemical Company as selling agent for Apinol. The Council is assured that this preparation will be marketed in accordance with its rules.

CORRESPONDENCE

PRESIDENT KEIPER ON MEDICAL ORGANIZATION

Lafayette, Ind., Oct. 1, 1915.

To the Members of the Indiana State Medical Association:

Dear Confreres:—Our House of Delegates in annual session assembled on Friday, September 24, did me very great honor when it elected me president of the Indiana State Medical Association. I very deeply appreciate this mark of confidence and esteem, and accept the duties and responsibilities of the office as opportunities to render our beloved Association better service than in the past.

The Indiana State Medical Association has had a long and honorable history, as the orators are wont to say. The successful endeavor of its past should incite us to strive for a more glorious future, therefore let us all become imbued with the dignity of our work. Let us strive to serve suffering humanity better. Let us not forget that we are scientists, and as such deport ourselves patiently.

May I suggest that it should be our especial endeavor this year to enlist within our county societies the men and women of our profession who are honorable and upright but who are not yet affiliated with us. There are at least a thousand and they are not associated with us because, perhaps, no one has taken time to present to them the claims our organization has upon them, and the advantages that membership in the Indiana State Medical Association has. We can be mutually helpful.

The prosperity of our component county societies determines in a very large fashion the prosperity of the Indiana State Medical Association, therefore every means should be taken to stimulate the scientific spirit in our societies and their meetings. No meeting of any county society should pass without a well-prepared paper upon some medical or surgical subject read and discussed thoroughly. Sociability should be encouraged. I would suggest that we eat together frequently, and after dinner proceed to the scientific business of the meeting.

Members of the Indiana State Medical Association who are not already Fellows of the American Medical Association, should become Fellows as soon as possible, and thus ally themselves with its magnificent work. The annual dues are five dollars per Fellow. The invest-

ment will be most profitable because, in the first place each week will come *The Journal of the American Medical Association,* the best weekly medical journal published anywhere, and in the second place the privileges attending the annual meetings of the Association are no less valuable.

Wishing you all individually and collectively a year of abundant prosperity, I remain

Fraternally yours,

Geo. F. Keiper,

President, Indiana State Medical Association.

AN APPEAL FOR COUNTY MEDICAL HISTORIANS

Muncie, Ind., Oct. 1, 1915.

To the Editor:—Be kind enough to call attention to the necessity of having the history of every county medical society in Indiana represented in the work being done by the Indiana Historical Commission in connection with Indiana's Centennial Celebration to be held in 1916. The social, religious, political, military, educational, commercial, and in fact every important department of endeavor in the state of Indiana will be represented in the history of the state, and the medical profession should not fall behind other professions by failure to be represented properly. I sincerely hope that at an early meeting of every county medical society in Indiana proper steps will be taken for the selection of an historian to represent his respective county. Those selected to act as historians should be especially fitted and qualified for the task, and they should enter upon the work with a zeal and earnestness that will spell success.

About twenty counties in the state have contributed, during the past few years, a more or less extensive history of said counties. Among those are Allen, Bartholomew, Clay, Delaware, Fayette, Fountain, Franklin, Gibson, Grant, Hancock, Jackson, Kosciusko, Madison, Noble, Ripley, Rush, Steuben and White, and I would suggest that these counties bring forward the history which was published several years ago and add to it so as to bring the history up to the present date. The histories of these counties will be found in the Transactions of the Indiana State Medical Society for 1874, and also in the Medical History of the State of Indiana, by G. W. H. Kemper, published in 1911.

Respectfully,

G. W. H. Kemper,

Historian of the Indiana State Medical Assn.

INFLUENCE OF ALCOHOL ON MORTALITY

Indianapolis, Sept. 30, 1915.

To the Editor:—The Department of Health of New York City in a circular announces the great need of more accurate statistics concerning the influence of alcohol on mortality. It says: "There are numerous deaths wherein alcohol, if not the primary cause, at least played an important rôle in mortality, without this fact having been recorded." Alcohol is an etiologic factor which certainly should be considered by the physicians and it is all too frequently omitted." To this we may add, there are deaths in which gonorrhea and syphilis have played an important part. The very numerous and weighty reasons that induce physicians if not to hide, to at least withhold this information are fully appreciated, but then again, a duty to the state and the state's interests must be considered and the boards of health would be shirking their duty if they do not make serious attempts to secure this information in order that it may be made the scientific basis of a campaign against these grave menaces to public health. Letters of confidential inquiry to physicians who report deaths in which alcohol or venereal diseases have been a factor in terminating life have not been kindly and satisfactorily answered. The State Board of Health, therefore, appeals to physicians that in every case where these factors have been a contributory cause of death, they state that fact upon the certificate. It seems that all objections to doing this may be omitted by the employment of medical terminology, such as ethylism, neuritis (ethylic), ethylic hepatitis, salpingitis (probably Neisserian), hepatitis (probably spirochaetal).

A plan which probably will be found to be a good one is for the physicians to send a brief note sealed with the certificate, the information thus obtained will be treated in the strictest confidence and the note can be destroyed. Of course, physicians understand they will do well to accept and perform the broad duty which they owe the community and not to let their sense of obligation to patients prevent them from supplying the department of health with this important information. The State Board of Health will welcome suggestions from physicians as to any other method of securing the much desired information.

Respectfully,

J. N. Hurty,

Sec. State Board of Health.

PUBLIC HEALTH

Each Saturday night free moving pictures concerning public health are given on the streets of towns in Clinton County. This is the work of Dr. E. F. Suhre, health commissioner. From reports received at this board, the people are deeply interested and Dr. Suhre is to be congratulated upon his successful work.

"Your Sex Hygiene Circular is excellent indeed." These are the words in a letter from a young man of Dayton, Ohio, to the State Board of Health. This young man seems to have concluded there is no substitute for righteousness, and proposes hereafter to take the narrow path of rectitude. In his letter he says: "I want to learn that which is good. I was converted to the Lord on April 2, 1915."

Health is Purchasable and so is ill health. The money we pay out for our ill health is something enormous. First, we buy great quantities of drugs, and the promiscuous taking of drugs is a great factor in producing ill health. The people of the United States spend $500,000,000 annually for drugs. We also buy autotoxemia when we purchase excessive amounts of meat and when our tables are overloaded with food.

"Wash Rag More Dangerous Than the Common Towel" is the dictum of the U. S. Public Health Service. The bulletin says: "The hotels and public hostelries have recognized this for some time and have supplied their guests with sterilized wash cloths in individual sealed packets. The damp, sour smelling wash rag still exists, however, in many private bath rooms. In the investigations the U. S. Public Health Service is conducting in regard to the prevalence of trachoma, it has found common towels and wash rags probably acted as a medium of distribution of the germs of disease.

Hygiene and Public Health are considered specially at the meetings of the American Medical Association, the Association of American Physicians and several state medical societies. The Indiana State Medical Association has not dealt with this most important matter except in the annual report of the Committee on Health and Public Instruction. Undoubtedly, the members of the Association are deeply interested in the subject and would favor its special consideration.

The City of Los Angeles has passed an excellent ordinance authorizing the employment of tuberculosis nurses. The ordinance commands and empowers the city health commissioner to employ visiting tuberculosis nurses in the proportion of one such nurse per 100 reported cases of tuberculosis in the city of Los Angeles. The duties of these nurses are fully set forth in the ordinance, and further power is given to the health commissioner to add to them and to make rules governing the nurses. The ordinance further empowers and commands "the purchasing agent of the city of Los Angeles to purchase on requisition from the health commissioner such supplies as the latter may from time to time deem necessary for the professional use of the tuberculosis nurses." This admirable ordinance was drawn and fathered by Dr. George Malsbury, the editor of the *Southern California Practitioner.*

The Destruction of Fly Larvae is a very important matter. The U. S. Department of Agriculture advises the use of borax to be sprinkled around the edges of manure piles and then watered with a sprinkling pot. Fly larvae cannot live in the presence of borax. The Department of Agriculture has recently issued another bulletin in which it announces some experiments in which it is proven that powdered hellebore sprinkled over manure, then watered with a sprinkling pot will destroy the fly larvae as soon as they are hatched from the eggs. Hellebore is recommended above borax because it does not lessen the value of manure as a fertilizer and does not injure vegetation regardless of the amount used. Hellebore decomposes in the manure and does no harm except to the fly larvae it is intended to destroy. The directions say use one-half pound of powdered hellebore mixed with 10 gallons of water to 8 bushels or ten cubic feet of manure. The mixture should be sprinkled carefully over the pile, especial attention being paid to the outer edges. About one pound of powdered hellebore per horse per week will destroy fly larvae in manure.

A Live Health Officer is one who does things. Such an officer does not wait for information to come to him. He goes out and secures information. Further, he does things and brings better conditions about. Dr. R. L. Holaday is such an officer. He is county health commissioner of Orange county and resides at Paoli, the county seat. In his June report he says: "June 14, 15, 16 and 17 I visited, in company with Mr. A. W. Bruner, food inspector of the State Board of Health, the towns of West Baden, French Lick and Orleans and made inspections of the hotels, restaurants, groceries, and many other places. Inspections, of course, were all of a sanitary nature. Also visited and inspected all the dairies and creameries in the county. Such orders as were required by the conditions were issued. June 20, visited home of Abraham Baty in South East Township and established quarantine for scarlet fever. June 28, served notice upon physicians in the county proper that they must make prompt reports of all cases of tuberculosis, as commanded by the law." The above quotations are enough to show that Dr. Holaday is interested and amounts almost to an all-time health officer. He certainly would make a good all-time health officer.

Dr. L. R. McCormick, town health officer of Crothersville, is for the present giving his entire time to public health work. This certainly is not because the compensation warrants, but because he desires to show what an all-time health officer can do. It is needless to say this is considerable sacrifice on the part of Dr. McCormick. Dr. McCormick's report reads as follows: "Inspected 290 closets and written notice for cleaning given when necessary. Inspected and recommended improvement of drains and sewers according to results and inspection. Rubbish hauled off, gutters cleaned, weeds cut, manure boxes covered, garbage looked after. The sewers from two canning factories extended out of town. Had a mad-dog scare in February and March, four cattle bitten and died. Smallpox epidemic in May and June, seventeen cases from one source, no deaths. Property owners generally helped in the sanitation of the town. No organized movement but simply begged, pleaded and in some cases forced." If Dr. McCormick goes on in this way he probably will make many enemies as well as a few friends. One who helps mankind as a usual thing must expect to be crucified.

SOCIETY PROCEEDINGS

MEMBERS REINSTATED DURING SEPTEMBER

Minor Miller ..... Madison
C. E. Stephenson ..... Indianapolis
C. C. Bitler ..... N. Madison
Robt. Henderson ..... Kingsbury
C. H. Tomlinson ..... Cicero
Jas. McCall ..... Terre Haute
J. E. Stultz ..... Fort Wayne

INDIANA STATE MEDICAL ASSOCIATION

Minutes of the Indianapolis Session

House of Delegates

FIRST MEETING

The first regular meeting of the House of Delegates at the annual session of 1915 convened at 7:30 p. m., Sept. 22, 1915, at the Claypool Hotel, Indianapolis. President Frank B. Wynn called the meeting to order and after the roll call the minutes of the meeting held at the annual session, 1914, were read and approved.

The reports of the officers were called for, and Dr. David W. Stevenson, treasurer, read his report in detail, which was received and referred to the auditing committee. Dr. Stevenson supplemented this report with a statement of his intention to resign from the office of treasurer at the end of the present fiscal year on account of pressing business engagements, which in the future would occupy all of his time. After having served the Association so faithfully and honorably for the past six years, his resignation was received with sincere regret, and it was the sense of the meeting that the Association owed Dr. Stevenson a vote of thanks.

The report of the secretary was received as printed in The Journal.

Reports of Dr. Joseph Rilus Eastman, as chairman of the committee on medical defense; Dr. G. W. H. Kemper, as chairman of the committee on necrology; Dr. O. B. Nesbit, as chairman of the committee on health and public instruction, were received and ordered adopted as printed in The Journal.

The report of Dr. Frank W. Cregor, chairman of the committee on public policy and legislation, was read in full and adopted. Dr. Cregor then introduced the following resolution, which was carried without amendment:

"That the Committee on Public Policy and Legislation be authorized to expend a sum not to exceed $200 for the purpose of organizing the friends of education in defense of the present Medical Practice Act."

A motion prevailed to have the president appoint a committee of three to confer with the State Board of Medical Examination and Registration concerning enforcement of the Medical Practice Act, said committee to report at the Friday morning session. Dr. Wynn appointed Drs. H. M. Thompson of Noblesville, W. R. Davidson of Evansville, and G. W. H. Kemper of Muncie.

The report of Dr. A. F. Guedel, as secretary of the committee to study the problem of criminal abortion,

its increasing prevalence and to recommend ways and means for arousing the public conscience on this question, was read and adopted, with the provision, however, that since the report was not complete, the incoming president should be instructed to continue a like committee to make a final report at the next session.

Owing to the lateness of the hour the meeting was adjourned to convene immediately before the general meeting Thursday morning in order to hear the remaining reports.

Charles M. Combs, Secretary.

SECOND MEETING

An adjourned meeting of the House of Delegates was called to order at 9 a. m., Thursday, September 23. The report of Drs. Alfred Henry, secretary, and Edwin Walker, chairman, of the committee on physicians' welfare was read and adopted, as was also the report of Dr. F. G. Warfel, secretary of the committee to study the problem of quackery and nostrum consumption. A discussion followed, commending the work of these committees, and leading to the adoption of a motion to have a further study made of the reports received, with the subsequent presentation of the facts at the next annual session.

Mention was made of the coming dinner in honor of James Whitcomb Riley, the doctor's poet, and the House authorized the appointment by the president of a committee to wait on Mr. Riley, extending him the congratulations and good wishes of this Association.

Adjourned. Charles N. Combs, Secretary.

THIRD MEETING

The final meeting of the House of Delegates was held Friday, September 24, at 11 a. m., President Wynn presiding.

It was moved and carried that nominating speeches be limited to two minutes. The election resulted in the selection of the following officers for the year 1916:

President, Dr. Geo. F. Keiper, Lafayette.

First Vice President, Dr. L. J. Willien, Terre Haute.

Second Vice President, Dr. F. A. Chenoweth, Winchester.

Third Vice President, Dr. W. F. Carver, Albion.

Secretary, Dr. Charles N. Combs, Terre Haute (reelected).

Treasurer, Dr. Charles N. Combs, Terre Haute.

Delegates to the American Medical Association for the ensuing two years: Dr. Joseph Rilus Eastman, Indianapolis; Dr. A. E. Bulson, Jr., Fort Wayne. Alternates, Dr. L. L. Whitesides, Franklin; Dr. W. H. Stemm, North Vernon.

Member of the medical defense committee for the ensuing three years. Dr. Joseph Rilus Eastman.

Place of meeting, Fort Wayne, Sept. 27, 28 and 29, 1916.

The following amendment to the constitution was read, after having been presented at the preceding annual session and published twice in The Journal. Substitute the following for Section 2, Article IX:

"The officers, except the councilors, shall be elected annually and shall serve for the next fiscal year following the annual session. The councilors shall take office the following January 1 after being elected by their respective district societies and shall serve for three fiscal years." Carried to have this amendment adopted.

Moved and carried that the treasurer give bond in the sum of $5,000, the same to be purchased from a bonding company at the expense of the Association.

The following report was received from the committee appointed to confer with the State Board of Medical Examination and Registration.

Indianapolis, Sept. 24, 1915.

The purpose of the Medical Practice Act is to see that only men and women of ability and education be entrusted with the lives of the state's citizens. We have been fortunate in that the members of our State Board of Medical Examination and Registration have sought to maintain a high standard of efficiency throughout the profession. It has not been their purpose, neither is it the purpose of this Association, to say that one school of practice shall stand to the exclusion of all others; but they have demanded that each legal practitioner be able to show special ability and special training. In this demand it is the sense of this Association that they are eminently correct. Whether regular or, if we be permitted the term, Heteropath, ample preliminary and medical education must be required. We cherish no animus toward any system practiced differing from our own, but we believe and must demand that anyone who attempts to accept the responsibilities incident to the conservation of human life be as capable as the best measures of law and the highest demands of ordinary right and intelligence require. The laity often misunderstand the attitude of the profession and ascribe jealousy as the motive behind any advance medical measures. This Association should go on record at this time as not opposing any branch of practice or any method of healing, but at the same time demanding the safeguarding of the people against incompetency and charlatanry. We believe in the purging of our own ranks of the unfit, and compelling compliance with the spirit as well as the letter of the law. We recognize the fact that the law is weak at many points and we recommend its amendment and advise the support by members of this Association of candidates for the legislature who will work for the strengthening of the medical laws of the state and the maintenance of a high standard of education and life and the fulfilment of the spirit of the law as well as the letter thereof.

We believe in a uniform standard applicable to all who would attempt to practice medicine. No class should be allowed to despise the law and trample on its requirements. Prosecutions should be made only to compel compliance with the law and enforce its standards.

We would recommend that the committee on medical defense be empowered to confer with the State Board of Medical Examination and Registration, and that a sum not to exceed $500 be placed at the disposal of the medical defense committee to be used in maintaining the standards of efficiency of the Medical Act.

H. H. Thompson,
Wm. R. Davidson,
G. W. H. Kemper,
Committee.

A spirited discussion followed, centering chiefly about the last paragraph recommending an appropriation, and a motion finally prevailed to discharge the committee and lay the report on the table.

Dr. Wynn then introduced the president-elect, Dr. Keiper, who stated that he would not rest on the honor of being president but would engage himself at once to the task of leading in the efforts to make the next year's work larger and better in every particular.

Adjourned. Charles N. Combs, Secretary.

The Council

The Council was called to order at 5 p. m., Sept. 22, 1915, at the Claypool Hotel, Indianapolis, and was attended by Drs. W. R. Davidson, W. H. Stemm, O. J. Gronendyke, G. W. H. Kemper, F. A. Tucker, O. B. Nesbit, G. G. Eckhart, E. E. Morgan, A. C. McDonald and C. N. Combs.

Verbal reports were made of the progress of the district and county societies. Dr. Tucker gave a detailed report which he wished to present in order to make amends for the absence of his report, when the remainder of them were published in the September Journal. Owing to the illness of Dr. Tucker during the early part of this year he was not able to attend to the duties of getting this report from his secretaries.

A novel plan was presented for getting material for the county society meetings, which consists of an arrangement with the county commissioners whereby indigents sent to the county hospital have the privilege of calling any member of the county society to wait on them and in return they allow themselves to be used as material for clinics which the county society may hold at the hospital.

Dr. Nesbit reported the success of Dr. Gwin, secretary of the Jasper-Newton County Society, in using the Cabot reports for program material. These reports may be subscribed to by sending to the Massachusetts General Hospital, and consist of the complete history of cases cared for by Dr. Cabot which subsequently came to autopsy. The plan is to read this history and description of the case and then allow the members to discuss the diagnostic probabilities. At the conclusion, have the pathologist's report read, together with Dr. Cabot's pathologic diagnosis.

From all reports the tendency seems to be towards the formation of groups of associated physicians. Thus four or five men have offices together, each one making himself responsible for keeping up to date in a certain special line. It may be, but usually is not, a community of financial interests, but at any rate the patients of any one man have the benefit of a diagnosis made by the collective group. This also allows the men to leave one at a time to take vacations and post-graduate courses without closing the office.

Dr. Eckhart reported the benefit which his district had received from the activities of Mr. Singer, the special representative from the American Medical Association. Mr. Singer was able to reduce the discord in some of the societies and bring in all of the eligible members. As a result several counties in the district have the largest membership and the most active work in their history. He left the impression that no mistake would be made in inviting Mr. Singer to come to other districts needing reorganization, if not in fact visiting the entire state. He advised county societies to do more and read less, that is, have fewer papers and more clinics, demonstrations, etc.

Adjourned. Charles N. Combs, Secretary.

Minutes of the General Meeting

Convention called to order at 9 o'clock, Thursday, Sept. 23, 1915, by the president, Dr. Frank B. Wynn of Indianapolis. Instead of an address of welcome or a president's address, that time was occupied by additional reports and discussion concerning the questionnaire sent out by the president.

A paper was read by Dr. Charles P. Emerson of Indianapolis on The Modern Conception of Nephritis. Discussed by Drs. George F. Butler of Kramer, John A. MacDonald of Indianapolis, H. O. Pantzer of Indianapolis, and G. W. McCaskey of Fort Wayne.

Dr. Thomas Jones of Anderson presented a paper on The Value of the Renal Functional Test in Surgery. No discussion.

The second general meeting was held in connection with the banquet on Thursday evening, Sept. 23, 1915, and was in charge of the president of the Association, Dr. Frank B. Wynn of Indianapolis. Three addresses were delivered, and were as follows:

The Relation of Endamebae to Alveolar-Dental Pyorrhea, by Dr. C. C. Bass, New Orleans.

The Relation of the Spleen to Certain Anemias, by Dr. W. J. Mayo, Rochester, Minn.

The Pathogenesis of Experimental and Spontaneous Appendicitis, by Dr. E. C. Rosenow, Rochester, Minn.

No discussion.

The third general meeting was called to order at 2 p. m. Friday, Sept. 24, 1915. At this meeting there was presented a symposium on obstetrical subjects, consisting of the following papers:

The Toxemias of Pregnancy, Dr. Charles E. Ferguson, Indianapolis.

Analgesia in Labor, Dr. L. Burckhardt, Indianapolis.

The Cesarean Section in Conservative Obstetrics, Dr. G. B. Jackson, Indianapolis.

The Effect of the Toxemia of Pregnancy on the Newborn, Dr. H. F. Beckman, Indianapolis.

Discussed by Drs. H. A. Duemling, Fort Wayne; C. N. Combs, Terre Haute; Fletcher Hodges, Indianapolis; A. S. Jaeger, Indianapolis; G. W. H. Kemper, Muncie; H. K. Bonn, Indianapolis; Hannah Graham, Indianapolis; Paul S. Johnson, Sheridan; Miles F. Porter, Fort Wayne; George R. Daniels, Marion, and J. H. Payne, Julietta.

Adjourned.

Medical Section

Section called to order by the chairman at 11 a. m., Thursday, Sept. 23, 1915; chairman, O. J. Gronendyke, New Castle; secretary, John A. MacDonald, Indianapolis.

Dr. Max A. Bahr, Indianapolis, presented a paper on A Case of Hysteria from the Viewpoint of the Freudian Psychology, which was discussed by Drs. Ernest H. Lindley, Bloomington; Albert E. Sterne, Indianapolis; C. F. Neu, Indianapolis.

Adjourned.

The second meeting of the medical section was called to order at 9 a. m., Friday, Sept. 24, 1915. Dr. Charles R. Bird of Greensburg presented a paper on Diagnostic Routine in General Practice. This was discussed by Drs. S. E. Earp, Indianapolis; W. R. Davidson, Evansville; A. C. Kimberlin, Indianapolis; C. S. Bond, Richmond; W. A. Fankboner, Marion.

Election of officers for this section for the coming year resulted as follows:

Chairman, W. R. Davidson, Evansville.

Secretary, John A. MacDonald, Indianapolis.

Drs. Joseph M. Barry and Jane M. Ketcham presented a paper on Benzol in the Treatment of Leukemia. Discussed by Drs. C. S. Bond, Richmond; W. A. Fankboner, Marion; A. C. Kimberlin, Indianapolis.

Dr. A. C. Kimberlin, Indianapolis, presented a paper on Some Points in the Early Physical Diagnosis of Pulmonary Tuberculosis. Discussed by Drs. Alfred Henry, Indianapolis; W. T. S. Dodds, Indianapolis; Charles E. Bird, Greensburg; A. W. Brayton, Indianapolis.

Adjourned.

Minutes of the Surgical Section

The Surgical Section of the Indiana State Medical Association met in the Palm Room, Claypool Hotel, Thursday morning, September 23, and was called to order at 11:05 a. m. by the chairman, Dr. Edwin Walker, Evansville.

Dr. Murray Hadley announced that the scientific demonstrations would be given at the Indiana University School of Medicine, beginning at 1:30 p. m.

Dr. W. H. Williams of Lebanon read a paper entitled, Diseases of the Gallbladder and Their Influence upon Adjacent Organs (chart illustrations).

The discussion was opened by Drs. Murray Hadley, Indianapolis, and Joseph Weinstein, Terre Haute, followed by Drs. Charles Stoltz, South Bend; E. H. Griswold, Peru; Vincent A. Lapenta, Indianapolis, and Williams, closing.

Dr. W. H. Baker of South Bend read a paper entitled, Some Considerations in Pelvic Floor Work in Women (illustrated with charts).

The discussion was opened by Drs. G. Eckhart, Marion, and Goethe Link, Indianapolis. Dr. Baker made no closing remarks.

On motion the meeting adjourned at 12:45 p. m. to meet Friday at 8:30 a. m. in the Henry IV room.

The Surgical Section of the Indiana State Medical Association met for its second meeting in the Henry IV room, Claypool hotel, Friday morning, September 24, and was called to order at 9:05 a. m. by the chairman, Dr. Edwin Walker, Evansville.

Dr. H. O. Mertz, Laporte, read a paper entitled, Uronephrosis—Its Significance and Detection, with review of cases (lantern slide illustrations).

The discussion was opened by Dr. H. G. Hamer, Indianapolis, followed by Drs. P. E. McCown, Indianapolis, and Mertz, closing.

Dr. B. P. Weaver, Fort Wayne, read a paper entitled, Some Surgical Disorders of the Upper End of the Femur.

The chairman postponed the discussion of Dr. Weaver's paper until after the election of officers for 1916.

Dr. W. D. Gatch, Indianapolis, placed in nomination for chairman the name of Dr. John H. Oliver, Indianapolis. The nominations were closed by motion and Dr. Oliver was unanimously elected chairman of the Surgical Section for 1916.

The name of Dr. T. B. Eastman, Indianapolis, was nominated for reelection as secretary, and Dr. Eastman declined the honor with the request that the office be passed around. Dr. Eastman has served three years as secretary.

The name of Dr. David Ross, Indianapolis, was placed in nomination as secretary and he was unanimously elected to that office.

Dr. David Ross, the newly elected secretary, took charge of the meeting, and called for discussion on Dr. Weaver's paper.

The discussion was opened by Dr. J. H. Oliver, Indianapolis, Dr. Weaver closing.

Dr. Joseph R. Eastman, Indianapolis, read a paper entitled, The Surgical Anatomy of Cleft Palate (with lantern slide illustrations).

The discussion was opened by Drs. B. P. Weaver, Fort Wayne, and David Ross, Indianapolis, followed by Drs. J. H. Oliver, Indianapolis, H. H. Bonn, Indianapolis, and Eastman closing.

Dr. W. D. Gatch, Indianapolis, read a paper entitled, Surgical Treatment of Chronic Empyema of the Thorax and of Pulmonary Tuberculosis (with presentation of patient for examination).

The leading discussants of this paper being absent, Dr. J. H. Oliver of Indianapolis discssed the paper. Dr. Gatch made no closing remarks.

Dr. James A. Work, Jr., Elkhart, read a paper entitled, Small Cysts of the Ovary.

There was no discussion.

On motion the meeting adjourned at 12:45 p. m.

Minutes of the Section on Eye, Ear, Nose and Throat

Chairman, Dr. John F. Barnhill, Indianapolis.

Secretary, Dr. E. M. Shanklin, Hammond.

The Section was called to order Thursday morning, Sept. 23, 1915, by the chairman, Dr. Barnhill, at 10:30.

Dr. George W. Spohn of Elkhart took the chair while the chairman delivered his address, entitled The Present Position of Oto-Laryngology in Medicine and Surgery.

Dr. Fred M. Ruby, Union City, read a paper on The Use and Misuse of Tinted Lenses in Refraction, which was discussed by Drs. Newcomb, Knapp, Keiper, Bulson, Stillson, Heitger, Heath, Wood, and, in closing, by Dr. Ruby.

On motion of Dr. Keiper, seconded and carried, Mr. Poser of Bausch and Lomb demonstrated the spectroscope.

Dr. Bulson moved that the election of officers be held on the afternoon of the first day, at the close of the first paper.

Seconded by Dr. Heath and carried.

The Section then adjourned.

The Section was called to order for its second meeting at 2:15 p. m., Thursday, September 23, by the chairman.

Dr. Marcus Ravdin, Evansville, read a paper on The Tonsil, which was discussed by Drs. Howard, F. V. Overman, Maurer, Spohn, Cline, Page, Heitger, Bulson, Tomlin, Adams, and, in closing, by Dr. Ravdin.

Dr. Edwin J. Lent of South Bend read a paper entitled Chronic Suppurative Mastoiditis, Accompanied by Intracranial Pressure. Case Report. Discussed by Drs. Barnhill, Keiper and, in closing, by Dr. Lent.

Dr. Casey A. Wood of Chicago read a paper on Some Recent Operative Procedures for the Relief and Cure of Chronic Glaucoma, which was illustrated by lantern slides. Discussed by Drs. Bulson, Hood, Wheelock, Heath and, in closing, by Dr. Wood.

The next order of business was the election of officers for the ensuing year. Dr. Barnhill being called away, Dr. Newcomb took the chair.

Dr. Heitger nominated Dr. A. E. Bulson, Jr., of Fort Wayne for chairman; seconded. Motion that nominations be closed; seconded.

Moved and seconded that the secretary cast the ballot of the Section for the election of Dr. Bulson as chairman, which he did, and Dr. Bulson was declared unanimously elected.

It was moved by Dr. Bulson, seconded and carried that a vice chairman be elected.

The name of Dr. Lafayette Page was nominated for the position of vice chairman; seconded, and Dr. Page, on the casting of the ballot by the secretary, was declared unanimously elected.

Dr. George F. Keiper, Lafayette: I wish to nominate Dr. E. M. Shanklin of Hammond, who has so well served us during the past year, for the position of secretary. Seconded and carried. The chairman cast the ballot for the unanimous election of Dr. Shanklin as secretary.

The scientific work of the Section was then resumed.

Dr. Walter N. Culmer, Bloomington, read a paper on "The Defenses of the Upper Respiratory Tract, and Their Preservation, which was discussed by Drs. Spohn, Coble, Tomlin and, in closing, by Dr. Culmer.

The Section then adjourned to meet September 24 at 9 o'clock.

The Section was called to order for its third meeting at 9 a. m., Sept. 24, 1915, by the chairman, Dr. Barnhill.

Dr. Keiper moved that the Section extend a vote of thanks to the chairman and secretary for the magnificent way in which the work had been handled this year. Seconded by Dr. Brose and carried.

Dr. Louis D. Brose, Evansville, read a paper on Vertigo, which was discussed by Drs. Keiper, Heitger, and, in closing, by Dr. Brose.

Dr. William S. Tomlin, Indianapolis, read a paper on Chronic Suppurative Ethmoiditis; Diagnosis and Treatment, which was discussed by Drs. Heitger, Spohn, Stevenson, Keiper, Barnhill and, in closing, by Dr. Tomlin.

Dr. Kent K. Wheelock of Fort Wayne read a paper on The Blood Clot Dressing in Simple Mastoid Operation, which was discussed by Drs. Stillson, Cline, Hollis, Tomlin, Bulson, Barnhill and, in closing, by Dr. Wheelock.

Dr. Wm. F. Clevenger, Indianapolis, read a paper on Deviations of the Nasal Septum and the Submucous Operation, which was discussed by Drs. Jackson, Overman, Tomlin, Brose, Page, McCaskey, Neu, Barnhill, and Clevenger, in closing.

Increased Blood Pressure was the title of a paper by Dr. Walter J. Leach of New Albany, which was discussed by Drs. Page, Heath and, in closing, by Dr. Leach.

Drs. Wm. F. Hughes and Frederick Heath of Indianapolis presented interesting eye cases, as follows: Zonular Opacity of the Cornea; Hereditary Optic Nerve Atrophy, with History of Blindness in Five Generations; Interesting and Rare Ophthalmoscopic Cases.

Dr. John R. Newcomb of Indianapolis presented a case for diagnosis at the request of Dr. James McCall, Jr., of Terre Haute. There was no discussion of these cases.

There being no further business to come before the Section, on motion it adjourned.

Report of the Committee for the Study of the Problem of Criminal Abortion

To the House of Delegates, Indiana State Medical Association:

Gentlemen:—I hereby wish to submit the classification of replies received to the questions sent out to members of the Indiana State Medical Association by the committee appointed for the study of the problem of criminal abortion. I wish it to be understood that in presenting this I present only statistical facts taken from replies to these questions.

Few papers were returned with all the questions answered. Many of the questions were answered too indefinitely to permit of classification. Unanswered or indefinitely answered questions are not considered in the following, the percentages being based on the definite answers only.

1. In your judgement is the practice of criminal abortion becoming more prevalent?

Fifty-seven per cent. of the answers stated that it is more prevalent; 42 per cent. of the answers stated that it is less prevalent.

2. If so, is it because physicians are growing more lax in their consideration of the physical and moral gravity of it?

Forty-six and a half per cent. answered that they believe physicians are becoming more lax; 54.5 per cent. answered to the contrary. Many of the latter state that while they believe criminal abortion is on the increase, it is because the laity is learning better where to go to get it done.

3. What is your observation as to the attitude of the church and church people toward the practice?

Twenty-two and a half per cent. state that the church is opposed to the practice. Some of these, however, mention the fact that the individuals of the church are not opposed to it; 77½ per cent. state that the church is indifferent in its attitude. It is stated by quite a few that the Catholic church has much more influence over its people in this regard than the Protestant church.

4. In your experience what conditions among married persons most frequently prompt the request?

Thirty-four per cent. claim the high cost of living; 24 per cent. claim too many children already; 15 per cent. claim social obligations; 12 per cent. claim general responsibility of rearing the children; 9 per cent. claim fear of labor by the mother; 6 per cent. want children but are not ready for them.

5. Does the request come more frequently from the husband and wife who have or have not children?

Eighty-seven per cent. answered those who have; 13 per cent. answered those who have not. In the answers given many specified that the request came

most frequently from families in which there were two or three children.

6. In refusing to perform abortion yourself, what arguments have you found most effective to dissuade persons so disposed from the act?

Forty-four per cent. argued the danger to the mother's health; 37.7 per cent. argued the moral wrong, the crime of it; 9.8 per cent. argued the legal wrong of the act; 4.9 per cent. argued the happiness of home life with children; 4 per cent. stated that they did absolutely nothing but refuse to have anything to do with the case. This question had many answers from physicians who used all of these arguments, selecting them to suit the individual case. Many claimed that all their arguments did no good, as patients went ahead in spite of them and had the operation performed elsewhere.

7. Is it better to appeal to the woman's moral sense; to hold up the picture of idealism and happiness which comes to woman from the rearing of children; or is it better to frighten her by narration of the serious consequences which may follow?

The difficulty of classification of the answers to this question made me consider the answers in combination with those of quesion No. 6.

8. What method have you to propose to arouse the public conscience on this question?

Sixty-six per cent. advised education of the laity. Some advised education from the period of childhood; others education through the lay press; by women's clubs; some education from the pulpit. Thirty per cent. advised legal prosecution. Various methods for obtaining evidence and conviction were suggested. Some suggested detectives, male or female; forcing testimony from some patient who has been aborted; trapping the abortionist by getting him to use the United States mail for his advice. A small percentage of the answers to this question advised more general teaching of preventive methods. Another small percentage advised the revision of the laws, stating that under the present law it is very difficult to secure conviction.

9. What, in your judgment, is the best way to reach the criminal abortionist?

All answers called for vigorous prosecution, exposure, revocation of license of the abortionist.

10. When you are called to a case where the criminal abortionist has begun the work and left you the disagreeable task of further care of a serious condition, what is your method of safeguarding your own reputation?

Thirty-nine per cent. were for calling into consultation another reputable physician; 26 per cent. secured a verbal statement in the presence of witnesses; 13 per cent. secured signed statements of facts from the patient; 22 per cent. took no precaution whatever.

11. Is the practice of self-abortion growing more prevalent or less?

Sixty-four per cent. claim it is more prevalent; 35 per cent. claim it is less.

12. What methods have you found the laity employing to induce abortion?

Seventy-five per cent. claim the introduction of instruments of various sorts, the ordinary hard rubber catheter being vastly preponderant; 24 per cent. stated the use of drugs; ergot and cotton-root bark in the majority of cases. One or two claimed general external traumatism.

13. Kindly make here statement of any knowledge or views you may have regarding criminal abortion.

The only adequate way of presenting these answers would be to write them out in their entirety. This, however, not being feasible, the following suggestions were taken from the replies and are here presented:

A few state that where the family is large (five to eight children) and the parents poor, abortion may be morally justified.

It has been suggested that physicians be given police power to arrest those seeking abortion.

The complete exposure of every case met with is suggested.

Some claim that the so-called "reputable" physician should be stopped from performing operations.

Others would prosecute both the physician and the patient.

Two or three stated that it would be well to legalize the operation.

Not a few would entirely revoke the license of the operator.

Many stated that under the present law it is difficult to convict.

Some state that, as the science of aseptic surgery advances, abortion becomes a safer procedure for both the physician and the patient, hence there are more abortions performed by physicians.

A few advise the general teaching of preventive measures in poor families.

Some believe the occasional abortionist operates with the idea that his sympathy will secure for him the legitimate practice in that family.

Respectfully submitted.

Arthur E. Guedel,
Secretary of the Committee.

Report of Committee to Study Quackery and the Nostrum Evil

House of Delegates, Indiana State Medical Association:

Gentlemen:—The committee appointed to study the problem of nostrum consumption and quackery have made a very careful study of the questionnaire sent to each member of the Association. There is a division of opinion as to how effective the campaign of education against these evils conducted by the lay press has been, 45.5 per cent. believing the work effective, 44.2 per cent. ineffective, and 10.3 per cent. of the answers indefinite. However, the committee is of the opinion that even in those communities where little progress in this line is manifest that the leaven is at work and that very soon we shall see a great decrease in the use of these measures.

It is with a great deal of satisfaction that we note that a large number believe that a protest to the publishers of local newspapers against untruthful statements in advertising would be an effective means to curb this evil. Many instances can be cited where the lay press has changed its policy and refuses all liquor and nostrum advertising. Among these are the Chicago *Tribune*, Chicago *Record-Herald*, Boston *Globe*, Philadelphia *Public Ledger*, New York *Times*, New York *Herald*, *Collier's Weekly*, *Saturday Evening Post*, *Harper's Weekly*, and many others. It is with regret that we say that many of our religious papers have not yet heard this call to better things,

and are accepting and thereby endorsing preparations of an admittedly worthless nature.

This committee would suggest that each county society appoint a committee of three influential members to confer with the publishers of the local newspapers and protest against the acceptance of patent medicine and quack advertising. It is realized fully that the ideal situation cannot be reached at once, yet an effort such as suggested may be productive of much good.

There is apparently in many localities a desire on the part of some of our members who are in good standing to see their names and a record of their medical and surgical activities in print. This leads to much criticism and is a thing which should be very carefully guarded against. This committee makes a plea for the thoughtful consideration of the matter by each member and is confident much good will result therefrom. It is the custom of some societies to have their secretaries clip these bits of advertising and read them before the society. Such a practice leads to almost instantaneous reform on the part of the offender.

A careful study of over 1,000 prescriptions of recent issue, by Indiana physicians, reveals many instances where proprietary preparations, many of which are only semi-ethical in character, are very largely employed. The committee believes that a word should be said to clear up the matter in the minds of some. The usually accepted meaning of a patent medicine is one of doubtful composition, and no therapeutic value considering the broad field it is intended to cover, the laity making the diagnosis and accepting its appropriateness from the advice of the advertiser. A proprietary is one of known and constant composition whose formula accompanies each package. Of these there are many of value. A safe guide as to the value of these preparations is their acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. Everyone is familiar with instances in which the profession has introduced and created a demand for proprietaries and the manufacturer, after this has been done, has placed the article on sale direct to the laity through newspaper advertising. It is this practice that is being most effectively opposed by the Council on Pharmacy and Chemistry.

It is recognized by all that the Council has a tremendous undertaking on its hands, yet its work is done in a thorough manner and has the unanimous support from all whose opinions are sought.

Indiana, along with thirty-one other states, now has a law against making untruthful, deceptive or misleading statements in advertising. This with existing federal laws places in the hands of the county prosecutor a formidable weapon with which to combat the untruths which are so prominent in most of the proprietary medicine and quack doctor class of advertising. Of necessity no action can be undertaken by the prosecutor alone, but with the aid of our Association and the vigilance committee of the National Association of Advertising Men, many of the more flagrant cases of deceptive medical advertising can be eliminated. It is a very hopeful indication of progress to get the unanimous declaration of willingness on the part of our members to join such a move.

M. F. Johnsen, *Chairman.*
Frederick C. Warfel, *Secretary.*

Report of Committee on Physicians' Welfare

House of Delegates, Indiana State Medical Association:

Gentlemen:—The committee on physicians' welfare hereby submits a tabulated report based on 300 replies to the questions sent out recently to the members of the Association. The committee realizes that its work was begun too late and there was insufficient time given to the study of the answers received. We believe, however, that enough has been done to fix the attention of the members on the questions asked, and that it will lead to discussion and action which will improve conditions. On the whole, the results of the inquiry show a more favorable condition than we had anticipated, and a disposition to get together and solve our mutual problems.

Eighty per cent. feel that the State Association can do nothing to help them or the physicians of their community. This probably is an indication that they realize that their individual efforts and that of the local society is more important.

Although a surprise to the committee, very few of those who replied to the questions have grievances against brother practitioners. Twenty per cent. made complaint as follows and respectively: stealing cases, knocking, unethical practice, and cutting prices. There are in every community a few, and from the answers the proportion must be very small, who are lacking in principle and moral sense, and these must be dealt with locally and personally.

Fifty-one per cent. of those who replied to the questions are satisfied with the work that their local societies are doing. The things to be remedied are poor attendance, lack of fraternalism, too many compiled papers, and irregularity in holding meetings. Societies will do well to make out yearly programs, using every effort to have the papers, reports and discussions of real interest. The adoption of a definite course of study, as recommended by the A. M. A. committee on county society work, has proved useful in many societies. In short, the success of the county society depends on the individual efforts of its members.

To the question as to whether they were ever perplexed to decide what kind of a specialist should be called in consultation, 51 per cent. replied no, and 49 per cent. yes.

To the question as to whether patients complain that they are buffetted about from one specialist to another, often entailing great loss of time and expense before diagnosis is made, 62 per cent. replied in the affirmative and 38 per cent. in the negative. This condition is evidently caused by the shortcomings of both family physician and specialist. Has the family physician exhausted all means of investigation? Has he made a thorough examination of the patient? The public has a right to expect that he is proficient in the ordinary methods of diagnosis and should at least interpret the clinical findings. If then he is unable to make a diagnosis, he knows what kind of information he needs. We would amend the question by striking out "to what specialist is the patient to be referred?" for many of the patients stand a better chance in the hands of a good general practitioner with a wide range of study and experience. Or, if consultation must be secured with one with special technical training in a comparatively narrow field, the specialist should be one well trained in the science of medicine as well as in his own specialty. This then is a determining fac-

tor on the specialist's side. Is the specialist a broad-gage, scientific physician, well grounded in the essentials of all departments of medicine and possessing a thorough knowledge of his own specialty derived from study and experience? One will not go astray if such a man is called. Specialism has been much injured by half-baked or pseudospecialists who have not sufficient knowledge either of general medicine or of their specialty. Their opinions are crude, unsatisfactory and often dangerous. They are apt to exaggerate the findings in their department and overlook or underestimate factors outside of it. These are the men who often essay advice in other departments in which they know nothing, and the fact that they are regarded as specialists gives weight to it. The way, in our opinion, to correct these evils is for the family physician to be on the alert and exhaust every means of investigation, and when he finds he needs help, call in a good brother practitioner, and if the two need still further aid, select a man who is really a specialist. It is in the province of the practitioner to do away with the pseudospecialist by refusing to recognize his claims. The choice of a consultant always should be made solely in the interest of the patient. It is not fair for the patient to allow our judgment to be biased by any consideration but his welfare.

Eighty per cent. favor the establishment of diagnostic clinics in larger citics. Those who do not favor it give three reasons mainly, which are as follows: politics, stolen cases, and lost opportunity on the part of physicians to become better diagnosticians.

Seventy-three per cent. favor, and 27 per cent. do not favor a state diagnostic clinic, the staff of the same to be salaried and prevented from practicing medicine or surgery for fees.

The answers to these last two questions indicate that a majority favor the formation of diagnostic clinics, either private or state, made up of a number of men who will do team work; that a number of men working together can do better work than if they acted individually seems to be generally recognized. This question would have been better if the words "in large cities" had been left out. This can and has been done more successfully in smaller communities than in large citics. It has been difficult to make such combinations on account of the clashing of personal interests and the difficulty in making a satisfactory division of profits. In many places, however, such combinations are now in successful operation. Still, as a rule, to be successful there must be a recognized head who can compel each man to do his part and in case of failure, replace him. The doctors may retain their own practice and together support a laboratory, Roentgen ray, etc., and employ competent men to conduct them, or four to six or more may form a partnership. In some cases the latter plan has seemed to work very well. How permanent or successful they will be, time only will tell. Or one or two can establish the work and employ paid assistants. There is no getting away from the fact that teamwork is very desirable and those who do this best will win public confidence. The time has not yet come for the state to establish such a clinic. The difficulty of getting the best men to accept positions, and the danger of political meddling, would make the undertaking of doubtful value.

An average of three and one-half medical journals are read by those who responded to the inquiries.

Forty-five per cent. do postgraduate work every five years; 40 per cent. do it once in ten years, and 15 per cent. never do any postgraduate work.

Concerning the attendance at society meetings, 47 per cent. attend local society meetings regularly; 16 per. cent. attend state association sessions; and 3½ per cent. attend the A. M. A. sessions.

To the question "Are you imposed on by the laity, and in what way?" less than 15 per cent. answered in the affirmative, and many of these said it was their own fault. Services by telephone, for which many people do not expect to pay, is a source of common complaint. Not considering the doctor's account seriously as an obligation is mentioned by many.

It is encouraging that so many read medical journals, take postgradute work, and attend society meetings, and we can confidently expect improvement. Only 15 per cent. are imposed on by the laity, and most of them acknowledge it is their own fault. It is evident that a doctor can get his rights if he asserts them. There is really no reason why he should be seriously imposed on.

To the question, "What burdens have you peculiar to your locality?" only 12 per cent. had anything to mention. The lack of facilities for caring for the poor, lack of hospitals, counter prescribing by druggists, and poor roads were some of the burdens mentioned. It is quite apparent that these things depend on the doctor himself.

Less than half of those who answered the questions are employed by corporations, and 80 per cent. of those who are employed receive fees. Two thirds of these are satisfied with what is paid them.

Concerning the fees for insurance examinations the replies show that the fees vary from 50 cents to $5. The minimum is for industrial insurance. A great deal of fraternal insurance work is done at $1 for each examination. A few refuse to make any insurance examinations for less than a fee of $5. The excuse given by some for doing cheap insurance work is that others will do it if they do not.

Eighty per cent. of those answering the questions complain that the fees received are not commensurate with the services rendered and the high cost of living.

Concerning the fees for obstetrics, consultation, and calls, the replies showed that the average fee for obstetrics is $13. Ten dollars is the popular fee for consultation. In 200 replies tabulated it was shown that eighty-five men charge 50 cents, fifteen charge 75 cents, and 100 charge $1 for office calls. Out of the same 200, three charged 50 cents, fifty charged $1, ninety-five charged $1.50, and fifty-two charged $2 for residence calls. The average charge for office consultation was 77 cents, and residence calls $1.48. Many think that the fees are too low, but that the fees cannot be raised on account of the cut-rate doctors. The best way to raise fees is to give good service. If the office call is only a superficial examination, with some medicine, the patient pays more than it is worth, no matter how small the fee. If the doctor will thoroughly examine the patient, diagnose his trouble, give him proper advice and a prescription for a drug—if he needs it, and none if he does not—the average person will appreciate and pay well for the service. There are exceptions, but the public is being educated, and a majority of the people know what good service is and are willing to pay for it. What they want is not a bottle of medicine but a diagnosis and advice.

Relative to fees, the following has been brought to the attention of the committee: On account of the conditions set out in the Workmen's Compensation Law, every employer of labor is liable for the charges of the physician for taking care of injured employees during the first thirty days following an injury. This in itself will cause every man who employs labor to take out liability insurance. In other words, the physician will hereafter look to the employer for the fee for services rendered these cases, and he in turn will refer the matter to some liability insurance company. This means that most of our accident cases will be handled in this manner hereafter. Now comes the insurance companies with a schedule of fees, which they have made themselves and which are only about one third the regular fees charged for these services, and ask the physicians over the state to accept the schedules, promising the signers the business. This is not only unfair to the profession in general, as it tends to contract practice and that at beggarly fees, but it is likewise unfair to the injured employee for it prevents him from making a choice of a physician; besides the best men in the profession will not have anything to do with any such contracts and the injured men will be compelled to accept inferior service.

On the question of dispensing drugs and the charges for the same, 30 per cent. answered that they dispensed wholly; 65 per cent. dispensed and prescribed, while but 5 per cent. prescribed exclusively. The average drug bill is $430, and the largest one was $2,000. The extra charge for dispensing is not equal to the charge of the druggist. It is surprising that 95 per cent. do more or less dispensing. How can we complain of counter prescribing by the druggist under such conditions? Dispensing may be necessary in rural communities, but in small towns it is of doubtful value. In larger towns and cities where there are competent druggists it is indefensible. Nothing does more to cheapen the services of the physician. The argument that it is the only way to get a fee in some cases is not an argument at all but a confession of guilt. The doctor must do only what is to the interest of his patient. His own gain must be subordinated to this. If the patient must have drugs, a prescription by a capable physician filled by a competent druggist is best. Doling out a few tablets for 50 cents is not practicing medicine; it is robbery. When we have done away with dispensing, we can, with good heart, take up counterprescribing and the vending of nostrums by the druggist. In short, the opinion of the committee is that the first step toward improvement of the status of the profession is to correct our own shortcomings, then deal with the public. Get the beam out of our own eye before we look for the mote in the public eye.

Concerning the question of low fees and what should be done to raise them, invariably the answer was, "Get together and raise them."

The average collections are 81 per cent., but range from 40 to 100 per cent. Sixty per cent. take vacations. Those who do not take vacations live in the small towns as a rule. Many take vacations only when they do postgraduate work. Sixty-eight per cent. say that they take some form of specified recreation at home. Ninety per cent. have a copy of the code of ethics and all claim that they endeavor to govern professional action accordingly.

Edwin Walker, *Chairman.*
Alfred Henry, *Secretary.*

THE MUNCIE ACADEMY OF MEDICINE

Meeting of September 10, 1915

Regular meeting of Muncie Academy of Medicine was held in Muncie Y. M. C. A. building Friday evening, September 10, and was called to order at 8:15 by President O. E. Spurgeon, M.D.

Dr. F. W. Dunn reported a fatal case of opium poisoning in an infant. Dr. I. N. Trent told of an instance where two drops of laudanum proved fatal to a 3 months' old infant. Dr. O. E. Spurgeon cited two cases where the aromatic spirits of ammonia exercised a beneficient stimulating effect in carbolic acid poisoning.

The speaker for the evening, Dr. G. R. Andrews, being absent the secretary read a paper entitled, "The Mind of a Child," saying: Few parents have a satisfactory comprehension of the intracacies of a child's mind. A child may be better understood by his trained teacher than by members of his immediate family; yet most of us were born at a time when the child was handled by teacher and parent alike as a part of a group rather than an individual. Following establishment of bodily function dawns a consciousness, after consciousness comes intelligence, the ability to associate ideas and to gain knowledge from experience. No infant can be considered as a placid bundle of innocence for he is in reality a composite conglomeration of influences from untold ancestry, differing from every brother and sister in proportion and arrangement. While a teacher's success is limited by inherent capabilities of pupils, skill is not inherited. Of various pupils in the same class, some grasp facts readily and easily, others comprehend slowly and only after much coaching and labor. Children possess a misconception regarding the most common things and events and may derive their ideas from what the adult would consider a ridiculous analogy. Impressions are influenced by vivid imaginations, and introduction of suggestive questions decreases the accuracy of the reports of children. Therefore, if a child is discovered in a statement not in accord with facts it need not be assumed that he is telling an intentional lie, or that because a statement is untrue in part that it is so in all. Rules committed to memory often have an unintelligible meaning to the small pupil; it may be years before its value as a guide becomes apparent: as intelligence advances, the art of association becomes intertwined with memory. Our cranial vault is stored with ideas attached to one another by some law of connection. How frequently we hear a person say, "That reminds me of," etc. A thought may now be in the mind because a moment ago another thought was there having a direct or remote association. Uncontrolled thought carries one into realms of fancy which play so prominent a part in the mentality of every child. Induction and reason come into play here; of course, both are likely to be faulty but what can you expect from a child who has been taught the exploits of Little Red Riding Hood, Jack of bean stalk fame, Santa Claus and others of similar notoriety? Children are naturally witty and their spontaneous logic may sometimes be remarkably clear. A child who has few playmates and is much alone proves a more profitable study than one who has abundance of company. More than one child has been punished for

telling a vivid dream as a real happening. No one who has witnessed the "night terrors" of childhood, even if he has forgotten his own, can doubt the reality of these impressions. I have purposely omitted pathology. I do not refer to the child who has an abnormal faculty for "seeing things," or the Maid of Orleans type, I am dealing with the normal everyday child, and it is surprising to learn that so much of a child's play will have a bearing on the weird or supernatural, particularly among those who have been reared in a religious atmosphere.

Adjourned. H. D. Fair, Secretary.

Meeting of September 17, 1915

The subject for the evening was "The Classification of Insanity." From the united effort of all present to arrange a short definition for insanity, the following resulted: "Insanity is that mental condition characterized by a change in the usual manner of thinking, acting and feeling, the result of disease or mental degeneration."

The address for the evening was made by Dr. C. A. Ball, who said: To frame a definition of insanity which is inclusive and exclusive, and at the same time setting forth the essential attributes, seems impossible. There has been at least forty classifications which were based on etiologic, psychologic, symptomatologic or pathologic grounds, and all have had to be modified or given up as our knowledge has advanced. There are cases that developed normally for years and then became diseased. Such cases represent the diseased brain. Again, many children were born defective or became so in the early years, so that growth was impaired, or never reached maturity. This gives us two large classes; the insane proper and the idiots. As you proceed to study the cases of insanity proper, or the diseased brains which I just mentioned you will note from the history, conduct, speech, etc., states of depression (gloomy and unhappy ideas of melancholy), and states of exaltation (ideomotor, states of mania). The history will tell you whether they are acute, chronic, recurrent; whether traumatic, puerperal, climacteric, senile, epileptic, hysterical, toxic, etc., in their origin. A small percentage give the history of mania, lucid intervals, and melancholia, giving the entity a cyclical character, the so-called circular insanity. Another group of cases gives a symptom-complex of progressive mental enfeeblement associated with progressive paralysis of muscles of speech, of deglutition, of limbs, in fact of whole body with its phases of grandeur, tremor, epileptiform and apoplectic states. Another group have fixed delusions of persecution and grandeur, sometimes confused and weak; in others systematized into a most elaborate scheme with much logic and intelligence. Some of these fall among the melancholiacs, alcoholics and paranoiacs. I have only indicated how an elaborate classification can be built up.

Dr. Wadsworth: No man is perfect either physically or mentally. Every condition must be estimated by comparison. The effect of reactions on the mentality is influenced by the etiology, pathology and physical condition of the individual. A man is legally insane only when he has violated some law and becomes a menace to himself or the community.

Adjourned. H. D. Fair, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of Sept. 7, 1915

The Fort Wayne Medical Society met in regular session at the assembly room, September 7. The meeting was called to order by President Rhamy. No minutes.

CLINICAL CASES

Dr. E. J. McOscar reported a case history of a female child, aged 5 years, who was riding on the back of a wagon to which was attached a hay loader, fell off the wagon and was picked up on the prongs of the hay loader. Two of the forks passed through the body on either side of the spine, one perforating the abdomen. She was brought to the hospital four hours following the accident. There was no shock. On opening the abdomen it was found that one fork had perforated the intestine and had so badly damaged the right kidney as to require its removal. Drainage was established and the recovery was perfect.

Dr. A. E. Bulson, Jr., reported the case of a male seeking relief from sore throat. On examination there was found an ugly looking membrane covering both tonsils, the pillars of the fauces and the soft palate. This looked like a diphtheritic membrane. There was no increase in pulse or temperature. The membrane did not brush off and no necrotic areas were present on analysis of it. A smear showed streptococci and no diphtheria pustules. I have seen several cases of streptococcic sore throat but this was the ugliest case of all and unusual because showing no increase of temperature or pulse.

Case 2.—Male subject, with a history of having had a partial paralysis, resulting in a difficulty of motion of one arm. When I saw him he had on the left tonsil, and involving the anterior and posterior pillar and a portion of the vulva, a necrotic mass; exceedingly foul smelling material was oozing from this surface. This mass would not wipe off. Owing to the history of paralytic phenomena, a syphilitic infection was suspected and Wassermann reaction was made but proved negative. Examination of the necrotic tissue, examined microscopically by Dr. Rhamy, showed marked necrosis; the infection was with the organisms of Vincent's angina. Gangrenous sore throat diagnosed. The condition in the throat extended until it covered the entire pillars of the fauces, the tonsils and soft palate. Fate of the patient not learned.

DISCUSSION

Dr. Rhamy: I have seen more than one case of this kind. Once you have an opportunity to see one of these cases and noted the odor attending them, you can never forget it. The organism which is present is Vincent's double organism. In view of the so-called "stroke," I thought that this case might be syphilitic, but two Wassermann examinations were negative. In one case of the same type I made a vaccine from the culture. This patient recovered under this vaccine.

Dr. Bruggemann: A case last winter in Hope Hospital which began as Vincent's angina got worse under salvarsan, becoming a gangrenous sore throat. Finally the patient got well. Usually diphtheria is present without any or but slight increase in tem-

perature or pulse, but in streptococcic sore throat the temperature and pulse are high. Negative diphtheria cultures are worthless, as is evidenced by the routine procedure practiced by our local Board of Health. In many cases of diphtheria negative cultures have been obtained.

Dr. Porter: I do not believe that Vincent's angina and gangrenous sore throat are the same infection. The death rate from noma, which Dr. Rhamy said was the same infection, is higher than in Vincent's angina, and if I remember correctly, from the literature, the question of the bacteriology of noma is by no means a settled fact.

The paper of the evening was on the State Care of Tuberculous Subjects, by Dr. Van Buskirk.

DISCUSSION

Dr. Bruggemann: The question of state aid in the care of tuberculous subjects should come through a social service department. A state which is doing its full duty should establish a social service department. It does not do much good for the physician to send a tuberculous patient away with a prescription and directions for proper living when that patient has not sufficient money to buy the necessities of life. The death rate of tuberculosis in this city has decreased not so much from the care which the Anti-Tuberculosis Society has given them, but mostly from the publicity given this subject through the daily papers. In this way tuberculous subjects are becoming more familiar with the handling of their own cases.

The physicians of the city are not reporting tuberculous cases as they should. Our city law is insufficient to carry on the tuberculosis inspection of cattle, and what little work has been done has been held up by local means.

Dr. Bulson: What is done with the reports of tuberculous cases sent in?

Dr. Van Buskirk: Nothing much as yet; they are sent to Indianapolis and put in the hands of a clerk who is supposed to classify them.

Dr. Bulson: The doctor hesitates to report a case of tuberculosis occurring in all of his families. The chances are that he will lose this family if he makes this public property, as he would be compelled to do if he reported it to the board of health. I have heard doctors object to this law for this reason.

Dr. Bruggemann: It is just that attitude of the profession which prevents any accurate work along this line. Because a man with a well-to-do practice has a case of tuberculosis in one of those families and does not report it, he is just as guilty as the man who does not report any other contagious disease.

Dr. Van Buskirk, closing: The same excuse, "Well-to-do practice," has prevailed with all the material which doctors have been required to report in the last fifty years. It is not because they cannot report these cases, it is because they will not. In looking over the local birth returns for the last twenty-five or thirty years, there are some physicians practicing in the city of Fort Wayne who, according to this record, have never presided at an obstetric case.

A communication from the State Board of Medical Registration and Examination relative to the procuring of evidence for the purpose of the revocation of a physician's license was read. Motion carried that this society recommends that the state board obtain a transcript of the evidence in this case direct from the clerk of the Adams Circuit Court.

Meeting adjourned.

G. Van Sweringen, Secretary.

Meeting of Sept. 14, 1915

The Fort Wayne Medical Society met in regular session at the Lutheran Hospital, eighteen members present. The meeting was called to order by Dr. J. C. Wallace, president pro tem. The reading of the minutes was dispensed with. The meeting was in charge of Drs. Morgan, Duemling and Schneider.

CLINICAL CASES

Dr. Morgan reported the following cases:

In considering birth palsies I wish to eliminate such causes as hydrocephalus, abscess and tumor of brain, and confine myself to the accidents occurring in the birth of the child.

This may be a hemiplegia, diplegia, paraplegia or monoplegia, although monoplegia is exceedingly rare. The clinical manifestations are all about the same. These paralyses may be accompanied by contractures, choreiform movements, mental impairment, epilepsy, or any number of nervous symptoms usually alluded to as postparalytic. In 225 cases examined by Peterson and Sachs, right hemiplegia occurred in 81, left hemiplegia in 75, diplegia in 39 and paraplegia in 30.

Etiology.—Many so-called birth palsies show a history of parental disturbances such as, epilepsy, insanity, neuroses, or fright of mother; but I want to quote Sachs as saying that syphilis does not play the important rôle given it by some writers.

Cerebral paralysis, which is the result of conditions occurring during labor—birth palsies—may arise from asphyxia in tedious and prolonged deliveries, according to Sachs, and are more disastrous at times than forceps accidents. I am at a loss to differentiate between the two causes.

Here are two cases—one a forceps delivery and the other not, although it was a long, hard labor. Both primipara; both mothers have since had normal labors and have normal children. These children, both aged 4 years, have right hemiplegias. The forceps case was an occipitoposterior presentation and I was the third man called to deliver it. I understand that before I saw the case forceps had been applied a number of times and had slipped off. It would not be surprising if there had been some injury done in that case, but in the other case no forceps were used, nor was labor in any way interfered with, yet we have the same condition.

Seventy-eight autopsies held by Peterson and Sachs show as primary lesions:

Hemorrhage	23
Embolism	7
Thrombosis	5
Tubercle	1

While as terminal lesions there were atrophy, sclerosis and cysts, forty, and parencephalus—that is, a pathologic loss of substance, forming cavities or

cysts running from the cortex of the brain toward the center, affecting the motor region, either unilateral or bilateral—two.

In all probability hemorrhage is the most frequent primary cause of the real birth palsies, some of the others being secondary. This hemorrhage is more likely to be meningeal than cerebral and is usually in the subarachnoid space, thus differing from the cerebral hemorrhage of adults, which occurs more frequently in the region of the internal capsule.

DISCUSSION

Dr. Pulliam: I do not believe that this paralysis occurred as a result of the forceps delivery. They are both a type of infantile paralysis, not acute infectious type but purely cerebral. If these cases were due to injury, that injury necessarily must have been great in extent to involve all the motor area.

Dr. Morgan, in closing: Both these cases were hard labors. They were primipara. A forceps that fits well, tractor made in a proper line, does not produce palsies. The pressure in these cases of birth palsy is usually made directly over the Rolandic area.

Dr. K. K. Wheelock gave an account of an original operation for acute glaucoma.

THE SUBCONJUNCTIVAL SETON IN CHRONIC GLAUCOMA

My operation is done as follows: Do the Herbert operation in part or completely, so that a broad opening may be made through the corneoscleral tissue into the anterior chamber. Then pass a Reverdin needle through the subconjunctival channel made by dissecting up the conjunctiva, down to the corneal margin, through the sclerocorneal wound into the anterior chamber; puncture the cornea, open the eye of the needle and thread it with a loop of "OO" twisted white silk thread, close the eye of the needle and withdraw the thread back into the anterior chamber and the subconjunctival channel. The conjunctival wound may be closed. The distal end of the double thread lies in the anterior chamber and the loop end of the silk, which has been disengaged from the needle lies in the channel made under the conjunctiva. There should be no reaction following this operation and its simplicity recommends it.

Dr. H. A. Duemling gave the following case history and exhibited Roentgen-ray plates of the case:

Mrs. C. R., aged 41.

Previous History.—This patient has two children, the youngest aged 18 years. She gives a history of menstrual colics from the very beginning of her menstruations. She had to keep to her bed nearly always at the menstrual periods. She gives a history of rheumatism that she had when she was about 16. She did not have typhoid. She gives a history of remittent fever. She was married when she was about 20 and both of her labors were normal. The first baby was born before the physician arrived. She was never well after the birth of her last baby. Her physician informed her that she had a very much enlarged uterus, that she had "ovarian trouble." She had a leukorrhea, she had considerable pain and distress through the pelvis. She was under office treatment for a number of years, she thinks about seven years. She continued various local treatments for three years with another physician. At that time her physician said he discovered a tumor on the uterus. At this time she consulted Dr. J. C. Webster of Chicago, who advised her to undergo an operation, which was later performed at her home by Dr. McKellar of Chicago. In this operation the abdomen was opened through the vagina and a tumor removed from the left ovary. From this operation she recovered very slowly. She was in bed six weeks and unable to attend to any of her duties for one year. Within the last five years she says she has been better as regards the pain in the pelvis, as regards the condition of her stomach and as regards her many headaches.

Present History.—About the middle of July she became ill with a severe pain in the back of her head, which lasted two days and was a repetition of similar attacks she had been having for the past three or four years. At the same time she had some abdominal distress.

Examination.—Abdominal palpation disclosed a kidney-shaped, smooth, not very tender tumor in the right hypochondrium. This tumor was about the size of a small cocoanut. It could be moved from side to side. Its lower pole extended to a little below the umbilical plain. It moved slightly on respiration. It was rather dense in structure and tender on deep pressure. It seemed to have no connection with any pelvic organ. Uterus is large and in normal position. Tender in left pelvis, also in right pelvis. The tumor in the abdomen has absolutely no connection with either of the pelvic organs. The uterus is slightly movable.

Diagnosis.—Renal tumor. On opening the abdomen a smooth tumor presents, larger than the palm of the hand, that is lenticular in its shape and carries with it the gallbladder, and is a portion of the liver. The edge of the lobe of liver that forms the tumor is attached to the free border of the falciform ligament of the liver to the extent of about 1½ inches.

Dr. Morgan also presented a case diagnosed as paratyphoid.

The necessity for the election of alternates to the State Medical Association was announced by the secretary. On motion, Dr. H. A. Duemling and Dr. K. K. Wheeling were nominated and elected.

Bills of C. J. Lose for $10.25, and H. Zuhr Muhlen for $4.00, were allowed.

Society then adjourned to luncheon.

G. Van Sweringen, Secretary.

DELAWARE COUNTY MEDICAL SOCIETY

Regular meeting of Delaware County Medical Society was held in the Muncie Y. M. C. A. building, Friday evening, September 3, and was called to order at 8:15 by President C. M. Mix, M.D.

Dr. C. C. Mills read an excellent paper on "General Peritonitis," from which the following was abstracted: The symptoms of peritonitis are chilliness, rigor, rise of temperature, vomiting, intense abdominal pain: the abdominal wall is excessively tender and gradually becomes rigid. The pain may first be local and correspond to the seat of the primary lesion, but soon becomes diffuse. Respirations are shallow; talking, coughing, straining or urination is avoided as much as possible because of pain such acts produce. Constipation is the rule, pulse is usually rapid and small. Because of ease with which the

peritoneum absorbs liquids, infections from the various sources of introduction are readily taken up. These sources are principally the appendix, duodenum, gallbladder, stomach, female generative organs and typhoid perforation. One remarkable point frequently noticed in general peritonitis is that the temperature taken by the mouth does not correspond with the rectal temperature which may be either higher or lower than the former, according to the seat of infection. In perforation of the stomach, duodenum or gallbladder the pain is usually at the point of leakage for a few hours; but not so when the leakage is in the appendix—the pain may be and generally is as severe in one part of the abdomen as another, but after a few hours locating at McBurney's point.

In treatment the importance of the Fowler position is generally recognized. Food should be withheld, cold applied to the abdomen. Opiates should be prohibited when likely to obscure symptoms or afford a false sense of security. In repairing a leak in the upper abdomen it is usually sufficient to run two or three sets of Lambert's sutures over the opening, closing the abdomen around a liberal drain. Flushing the abdominal cavity is dangerous. Time is important. Get in quickly and get out as soon as possible. Early diagnosis and prompt operation will protect your reputation and benefit your patient.

Dr. I. N. Trent traced the evolution of the treatment of peritonitis during the past forty years and quoted early authors who differentiated between the traumatic and idiopathic types.

Dr. J. C. Quick advocated prompt and thorough evacuation of the bowels not only as an advisable but a live-saving measure, and cited the treatment of thirty cases without a death in proof of his contention.

Dr. C. M. Mix gave the following terse plan of action that is indicated in the great majority of instances. Open the abdomen; repair the lesion; drain; put patient in Fowler position and give plenty of opium.

Adjourned. H. D. Fair, Secretary.

DUBOIS COUNTY

Dubois County Medical Society, on special invitation, met at Ferdinand, September 28, and were royally entertained by Dr. E. E. Schriefer who saw to it that the visitors to his town were provided with choice refreshments and cigars. The party left Huntingburg on a chartered train at 12:30 p. m. and returned at 4:30 the same afternoon.

Meeting called to order by Pres. O. A. Bingham. Fourteen members present.

Dr. L. C. Lukemeyer of Huntingburg read a paper on "Pruritis." The discussion was opened by Dr. Sturm, after which all members present joined in the discussion.

After the completion of the program, it was voted to hold the next meeting of the society at Huntingburg on the afternoon and evening of October 19, with lectures by two prominent physicians. The meeting will close with the annual banquet in the evening, when the wives and sweethearts of the members will be guests of honor.

Adjourned. S. L. McKinney, Secretary

ELKHART COUNTY MEDICAL SOCIETY

Meeting of September 9 called to order by Vice President Teters at 8:20 p. m. in Dr. Work's office, Elkhart. Twenty-one members were present. Minutes of preceding meeting read and approved. Application of G. W. Grossnickle, Elkhart, for membership read and referred to board of censors.

Motion made and carried that chair appoint two committees, one on program and one on arrangements, for annual meeting in Goshen in December. Program, Yoder, Ash and J. A. Work, Jr. Arrangements, Snapp, Kirby and Page.

Paper, "Salpingitis," Paul B. Work, Elkhart. Tubal inflammation usually accompanied by more or less local peritonitis and pelvic cellulitis. (1) Gonorrheal —50 to 85 per cent. of all cases direct continuity from vagina via endocervix and endometrium to the tube. Fimbriae become sealed. Purulent exudate causes organ to sink into pouch of Douglas where it remains firmly adherent. Gonococcus cannot live in its own pus—hence in a few months a pus tube becomes sterile. This forms the cause of most sterile or "one child" families. (2) Pyogenic—due to streptococci, staphylococci, et al. Important rôle of anaerobic bacilli and colon bacilli just recently recognized. Characteristic odor. Pyogenic infection, in contradistinction to gonorrheal, traverses the endometrium, invades the subendometrial spaces and reaches the tubes and other adnexae by way of the lymphatics and blood vessels. Greater tendency to pelvic cellulitis, oöphoritis, abscess formation and extensive adhesions, the pelvis frequently becoming one solid mass. Follows abortion, instrumentation at delivery or curettage. Although infection is severe and often sufficient to cause death, it is less frequently cause of extensive destructive changes in lumen of tube with sterility. Appendix frequently involved in right-sided tubal infection. (3) Tuberculous—usually secondary to tuberculosis elsewhere in the body. Eight to 10 per cent. of appendages removed for inflammation are tuberculous—Williams. Typical tissue changes, especially plasma cells, can in most cases be demonstrated—Wätjen. Frequent simultaneous tuberculous infection with gonococci, streptococci, staphylococci, colon bacilli, etc. Four varieties of pure tuberculous salpingitis: (1) miliary granular with ascites, (2) pyogenic tuberculosis, (3) lardaceous tuberculosis, (4) combinations of two of above.—Jayle. Granular with ascites only one easily diagnosed clinically.

Principles of Rosenow exemplified by the systemic effects produced by absorption of toxic matter from an acutely inflamed tube but more especially from a chronic, a "healed" tube. We must regard with suspicion any latent, encapsulated, adherent mass found in the pelvis of a woman suffering with arthritis, nephritis, arteriosclerosis, hypertension, cardiac degeneration, anemia, neuritis, backache, weakness, etc., ad infinitum. Illustrative case cited.

Treatment of most cases is ultimately surgical.

Operation in acute salpingitis absolutely contraindicated. Rules laid down by Frank F. Simpson: (1) patient shall have recovered from the acute illness and shall have regained a satisfactory margin of reserve strength; (2) temperature shall not have

risen above normal for a single time for a minimum period of three weeks; (3) there shall have been no marked or persistent rise of temperature following a careful bimanual examination; (4) inflammatory exudate surrounding the focus of infection shall have been completely absorbed. Contrary to the large majority of gynecologists, Boveé operates on tuberculous and gonorrheal salpingitis as soon as diagnosis is made—even cases with temperature of 103.6. He claims satisfactory results. Goldstine's statistics reviewed and the radical trend of his conclusion that both ovaries should be removed with the diseased tubes criticized. Operator should be guided by conditions—age of patient, desire for children, etc. Bell of Liverpool excises both tubes and a V-shaped portion of the uterus, containing the insertions of the tubes, thus preserving the ovaries and enough of the uterus to insure menstruation. In older women, panhysterectomy is the operation of choice. Mortality in operations for salpingitis given as varying from 1.7 to 10 per cent.

SUMMARY

1. Three main types of salpingitis—gonorrheal, pyogenic, and tuberculous.

2. Each latent salpingitis is a potential focus of systemic infection.

3. Treatment is conservative and surgical.

Paper, "Retrodisplacements of the Uterus," G. W. Kirby, Goshen.

Fifteen per cent. of all pathologic pelvic conditions are retropositions. So-called normal forward position of fundus is not constant, due to the movability of the organ. Definition of retroversion and retroflexion and the combined displacement.

Factors in etiology: (1) Unrepaired laceration of pelvic floor following childbirth or miscarriage. Overstretching or subinvolution of pelvic floor, the sacro-uterine ligaments, the broad and round ligaments, other pelvic tissues, including vagina; (2) Subinvolution of the body of the uterus or cervix due to laceration, infection or retention of placental remains or blood clots; (3) scars in the vaginal vault; (4) getting up too soon after labor, heavy uterus, relaxed vaginal wall and pelvis floor; (4) constant dorsal position after labor or miscarriage; (5) hypertrophy of cervix; (6) tumors of cervix, uterus, ovary or broad ligament; (7) inflammations of uterus or peri-uterine structures; (8) senile atrophy of uterus; (9) relaxation and stretching from certain kinds of work, faulty dress, full bladder or rectum; (10) chronic cough; (11) anemia, with loss of tone of cellular structures and other wasting diseases and senility; (12) adhesions in pelvis; (13) congenital defects.

Three degrees of displacement. Uncomplicated retrodisplacements produce few, if any, symptoms. Symptoms: backache, menorrhagia, leukorrhea, pressure symptoms in bladder or rectum, sterility, repeated spontaneous abortion, reflex nervous symptoms; neurasthenia and hysteria. Findings on bimanual examinations and with speculum.

Treatment depends on whether uterus is movable or fixed. Tamponage in reclining and in knee-chest positions after replacement. Hard and soft rubber pessaries and their indications. Description of various shaped pessaries.

Operative treatment in firmly fixed fundi or cervices. Remove diseased tissues. Choice of method for restoring uterus to normal position depends on the findings in an individual case. Three objects of operation: (1) restoration of pelvic floor and reduction in size of uterus; (2) relief of pelvic inflammation; (3) bringing uterus forward and upward and maintaining it through inguinal canals, a medium abdominal incision or through the vagina.

Alexander—Adams, Goldspohn, ventrofixation, ventrosuspension, intra-abdominal shortening of ligaments. Operations described. Dr. Kirby closed with a plea for more careful diagnosis of pelvic conditions and for more consistent treatment of retrodisplacements.

DISCUSSION

Dr. I. J. Becknell, Goshen: Differentiated between acute and chronic cases of retroposition. Defended hot douches, tampons and pessaries; claimed these measures give perfect result if used before adhesions form, of no use after adhesions have formed. He advises knee-chest position to patients who will not be operated.

Dr. E. E. Ash, Goshen: Retrodisplacements are amenable to treatment if seen before structural tissue changes have taken place. Pessaries and tampons of no benefit. Senility does not produce retroversion. Believes in doing extensive operation in gonorrheal salpingitis, removing both ovaries, tubes and uterus.

Dr. A. A. Norris, Elkhart: Ninety-nine per cent. displacements due to infection and trauma of labor, 1 per cent. to falls and hypertrophy of cervix.

Dr. W. A. Price, Nappanee: Thorough examination of all cases of pelvic trouble. Delay operation in salpingitis till all acute symptoms have subsided.

Dr. J. A. Work, Sr., Elkhart: Laceration during childbirth is main etiologic factor in displacements. He makes examination of patient in (1) erect, (2) dorsal, and (3) knee-chest positions. Has long since discarded all pessaries, but uses tampons. Recommends continued use of knee-chest position in treatment of pelvic troubles.

Dr. S. O. Barwick, Elkhart: Lack of tonicity of muscles produces retrodisplacements. Wearing of corsets accentuates condition.

Dr. D. L. Miller, Goshen: Very few conditions where a pessary will be of any benefit.

Dr. A. C. Yoder, Goshen: How prevent displacements? 1. Repair all lacerations after labor. 2. Change patient's position in puerperal bed. 3. Examine woman in first two months after labor. What shall be done with misplaced uterus? 1. Pessary no benefit if uterus is fixed. 2. Surgery is indicated in fixed uterus. 3. If it can be replaced, non-operative methods. If these do not relieve, surgery is indicated. 4. If surgery is refused, use pessary. In salpingitis, he is inclined to conservatism. Remove only as much as is necessary to give the woman relief.

Dr. E. M. Hoover, Elkhart: Emphasized prophylaxis in treatment of retropositions. Advises knee-chest position on retiring.

Dr. C. W. Frink, Elkhart: The day of the harmful corset has passed. They are worn today as a benefit rather than harmful. Women are going to excess in athletics. A simple displaced uterus does

not become adherent in the absence of inflammatory conditions. Practically all retrodisplacements of the uterus are chronic conditions—ligaments are stretched. Does not use pessaries, but a wool tampon temporarily. The treatment is surgical. Advocates absolute conservatism in treatment of salpingitis.

Dr. J. A. Snapp, Goshen: Treatment of salpingitis in acute condition is rest and heat.

Dr. S. T. Miller, Elkhart: Binders postpartum are prone to accentuate displacements. Fixation of retroplaced uterus should be followed by perineorrhaphy.

Adjourned. James A. Work, Jr., Secretary.

MADISON COUNTY

The opening session of the fall and winter season of the Madison County Medical Society was held at Anderson, in Public Library, October 1, with twenty-five physicians present.

Dr. Fred W. Terflinger, superintendent of Longcliff Hospital for the Insane at Logansport, gave a very interesting talk on "Mental Hygiene and Its Relation to Public Health and Disease Prevention." The paper dealt mainly with statistics, and the cost to the state occasioned by diseases, especially of the mind, which might be prevented.

Dr. Schmauss of Alexandria, delegate to the State Association meeting, gave a detailed report of the convention.

Meetings of this society will be held regularly from now on the last Tuesday of each month.

Adjourned. J. M. Stoddard, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Pantopon (Pantopium Hydrochloricum).—A mixture of the hydrochlorides of the alkaloids of opium, containing 50 per cent. of anhydrous morphine hydrochloride. It produces essentially the effects of opium, but, being devoid of opium extractives, may be used for hypodermic administration. It is probably absorbed more promptly and is free from the nauseant odor and taste of ordinary opium preparations. Pantopon (pantopium hydrochloricum) is also supplied as Pantopon (pantopium hydrochloricum) tablets 0.01 gm., Pantopon (pantopium hydrochloricum) hypodermic tablets 0.02 gm., and Pantopon (pantopium hydrochloricum) ampules 0.02 gm. The Hoffmann-LaRoche Chemical Works, New York City (*Jour. A. M. A.*, Sept. 4, 1915, p. 877).

Larosan Roche.—Calcium caseinate, containing calcium equivalent to 2.5 per cent. calcium oxide. In the treatment of diarrheas of infants a useful food is that made from the curd of milk and diluted buttermilk. The preparation of such a mixture of proper composition being difficult to prepare in a private home, Larosan Roche is offered as a substitute. The Hoffmann-LaRoche Chemical Works, New York (*Jour. A. M. A.*, Sept. 4, 1915, p. 877).

Betanaphthol Benzoate-Merck.—A nonproprietary preparation of betanaphthol benzoate (see New and Nonofficial Remedies, 1915, p. 210). Merck & Co., New York (*Jour. A. M. A.*, Sept. 4, 1915, p. 988).

Desiccated Pineal Gland, Armour.—The pineal gland of normal cattle, freed from connective and other tissues, dried and powdered. There is some evidence that there is a relation between the pineal gland and some processes of development and growth. The therapeutic use of the gland is in the experimental stage. Pineal Gland, Armour, is also supplied as Pineal Gland Tablets, Armour, 1/20 grain Armour and Company, Chicago (*Jour. A. M. A.*, Sept. 25, 1915, p. 1111).

Scopolamine Stable, Roche.—An aqueous solution of pure scopolamine hydrobromide protected against decomposition by the addition of 10 per cent. of mannite. It has the properties of scopolamine hydrobromide, U. S. P. It is supplied in ampules, each containing 1.2 c.c. (1 c.c. contains 0.0003 gm. scopolamine hydrobromide). The Hoffmann-LaRoche Chemical Works, New York (*Jour. A. M. A.*, Sept. 25, 1915, p. 1111).

Coagulen, Ciba.—An extract said to be prepared from blood-platelets and to contain thromboplastic substance mixed with lactose, 1 gm. representing 20 gm. dried blood. It is said to act as a hemostatic and to be useful in the treatment of local and certain internal hemorrhages. Solutions of Coagulen, Ciba, are used locally, intramuscularly and intravenously. A. Klipstein and Company, New York (*Jour. A. M. A.*, Sept. 25, 1915, p. 1111).

Calol Liquid Petrolatum, Heavy.—A nonproprietary brand of liquid petrolatum, U. S. P., said to be derived from California petroleum and to consist essentially of hydrocarbons of the naphthene series. It is colorless, nonfluorescent and practically odorless and tasteless. Its specific gravity is 0.886 to 0.892 at 15 C. Standard Oil Company of California, San Francisco, Calif. (*Jour. A. M. A.*, Sept. 25, 1915, p. 1111).

Tetanus Antitoxin for Human Use.—Marketed in syringes containing 1,500, 3,000 and 5,000 units each. Cutter Laboratory, Berkeley, Calif.

Diphtheria Antitoxin, Globulin.—Marketed in syringes containing 2,000, 3,000, 4,000, 5,000 and 10,000 units each. Cutter Laboratory, Berkeley, Calif.

Anti-Pneumococcic Serum.—Marketed in syringes containing 10 c.c. Cutter Laboratory, Berkeley, Calif.

Normal Serum (from the Horse).—Marketed in syringes containing 10 c.c. Cutter Laboratory, Berkeley, Calif. (*Jour. A. M. A.*, Sept. 25, 1915, p. 1111).

PROPAGANDA FOR REFORM

Grant's Epilepsy Cure.—Fred E. Grant, Kansas City, Mo., sells an "epilepsy cure" on the mail order plan. Analysis in the A. M. A. Chemical Laboratory demonstrated it to be a bromide mixture containing as its essential ingredients about 15.8 gm. potassium bromid and 0.9 gm. sodium bromid per 100 c.c. (*Jour. A. M. A.*, Sept. 4, 1915, p. 894).

Hydragogin.—The Council on Pharmacy and Chemistry reports that Hydragogin (C. Bischoff and Co.), advertised as a "most wonderful diuretic and cardiac tonic," is a shotgun mixture of semisecret composition, marketed under a therapeutically suggestive name and advertised by means of unwarranted therapeutic claims. Hydragogin is said to be a preparation of digitalis, strophanthus, squill and a saponin. The report explains the objection to the administration of digitalis and strophanthus in fixed proportion because of the varying rates of absorption and excretion of these two drugs. It further cautions

that since digitalis bodies must often be given to the point of beginning toxic action in order to obtain the full therapeutic effect, it is obvious that the administration of a mixture of digitalis, strophanthus, saponins and squill is especially liable to induce serious toxic effects which cannot be distinguished from the symptoms of the disease (*Jour. A. M. A.*, Sept. 4, 1915, p. 894).

Williams' Syrup of Malt.—The Council on Pharmacy and Chemistry reports that Williams' Syrup of Malt is ineligible for New and Nonofficial Remedies because it is an official article marketed under an unofficial title; because unwarranted therapeutic claims are made for it, and because the claims made are apt to lead the public to depend on it as a curative agent in serious diseases (*Jour. A. M. A.*, Sept. 4, 1915, p. 895).

Filudine.—This is a French proprietary sold in this country by Geo. J. Wallau, Inc., New York. It is offered as a remedy for "biliary insufficiency," "hepatic insufficiency," "intestinal dyspepsia," "all affections of the liver (diabetes, cirrhosis, cancer, etc.)," "malaria," "obesity" and "tuberculosis." The statements in regard to the composition of Filudine are unsatisfactory and even contradictory. The Council on Pharmacy and Chemistry reports that Filudine is a mixture of semi-secret composition; that the therapeutic claims are manifestly unwarranted. The name is not indicative of the composition, whatever that may be, and no rational excuse is offered for the combination of liver and spleen extracts (with or without bile extracts) with "thio-methyl arsinate" or "thio-cinnamate" of caffein (*Jour. A. M. A.*, Sept. 18, 1915, p. 1045).

Globeol.—Globeol is sold by Geo. J. Wallau, Inc., along with Urodonal, Jubol and Filudine. The Council on Pharmacy and Chemistry reports that when the description offered by Wallau is divested of obscuring verbiage, Globeol appears to be evaporated horse blood mixed with small quantities of colloid (dialyzed?) iron and manganese and a "dash" of quassia. The Council declared Globeol ineligible for New and Nonofficial Remedies because its composition is semisecret; because unwarranted therapeutic claims are made for it and because the asserted combination is irrational (*Jour. A. M. A.*, Sept. 18, 1915, p. 1046).

Verlie Gatlin Wrinkle Remover.—The Verlie Gatlin Beauty and Wrinkle Treatment was a Denver mail order concern which promised to remove facial blemishes of all sort and in other ways to make its customers (dupes) beautiful. A postoffice fraud order has been issued against the promoters of this medical fake (*Jour. A. M. A.*, Sept. 18, 1915).

The Horowitz-Beebe Cancer Cure.—Dr. J. W. Vaughan, Detroit, protests against the unauthorized use of his name in connection with the Horowitz-Beebe cancer cure, Autolysin. A private letter written one week after beginning trials with the cure to Dr. Beveridge was made to do service as a testimonial in a lay magazine (*Jour. A. M. A.*, Sept. 18, 1915, p. 1048).

Strychnine not a Cardiac Tonic.—As a result of investigations carried out in the Massachusetts General Hospital at Boston, Dr. L. H. Newburgh concludes that there is no pharmacologic or clinical evidence which justifies the use of strychnine in the treatment of acute or chronic heart failure (*Jour. A. M. A.*, Sept. 18, 1915, p. 1032).

Micajah's Uterine Wafers and Piso's Tablets.—The A. M. A. Chemical Laboratory has determined that Micajah's Uterine Wafers and Piso's Tablets are practically identical—a mixture of dried alum, borax and boric acid. While Micajah's Uterine Wafers are advertised to the medical profession, Piso's Tablets are a "patent medicine." The claims made to the public for Piso's Tablets are silly and mischievous—but no more so than those made to the medical profession for Micajah's Uterine Wafers (*Jour. A. M. A.*, Sept. 25, 1915, p. 1128).

Episan (Brobor).—The Council on Pharmacy and Chemistry finds Episan, recently renamed Brobor, ineligible for New and Nonofficial Remedies. Neither name indicates the active ingredients—potassium bromid 44.3 per cent., borax 41.2 per cent., zinc oxid 3.68 per cent., and amyl valerate 4 per cent. A physician prescribing the preparation under either name would not realize that he was administering borax, and therefore would not take the precaution to watch the intestines and the kidneys. Also, he would not realize that the treatment was essentially a bromid treatment. There is no evidence to show that borax is harmless, as claimed, or that either borax or zinc oxid is a nerve sedative. (*Jour. A. M. A.*, Sept. 25, 1915, p. 1130).

BOOK REVIEWS

General Medicine. Volume I of the Practical Medicine Series for 1915. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Illinois Post-Graduate Medical School. Price, $1.50. Price of series of ten volumes, $10.00. The Year Book Publishers, Chicago.

In this issue about 100 pages—or one quarter of the volume—is devoted to the discussion on tuberculosis. That emphasizes the importance of this subject at the present time. The rest of the volume is made up of brief references to the more important work done in the field of internal medicine during the year. The general physician will find in this book many things that ought to be of real interest and real value to him.

General Surgery. Volume II of the Practical Medicine Series for 1915. Edited by Dr. John B. Murphy, Professor of Surgery in the Northwestern University. Price, $2.00. Price of series of ten volumes, $10.00. The Year Book Publishers, Chicago.

In this little volume one can get all the essential points in the many contributions to this branch of medicine made during the year. The discussions are necessarily brief, yet they leave out nothing of importance. The reviewer presents the subject matter in a very clear and interesting manner. The illustrations are especially good.

Gynecology. Volume IV of the Practical Medicine Series for 1915. Edited by E. C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School, and H. M. Stowe, M.D., Assistant Professor of Obstetrics, Northwestern University Medical School. Price, $1.35. Price of series of ten volumes, $10.00. The Year Book Publishers, Chicago.

Although nothing that is distinctly new or of special importance has been added to our knowledge of this subject during the year, the reviewers have succeeded in turning out a volume of some 200 pages that is really a very good review of the general work done in gynecology. The pages devoted to Roentgen-ray, radium and allied methods of treat-

ment of tumors are perhaps the most important in this volume.

Obstetrics. Volume VII of The Practical Medicine Series. Edited by Joseph B. De Lee, A.M., M.D., and Herbert M. Stowe, M.D. Chicago: The Year Book Publishers. Price, $1.35.

This volume is up to the standard of its predecessors and the field is well covered. One of the most valuable reviews is that of the article by Wobus on pyelitis complicating pregnancy. The condition is one which should not be overlooked. Much stress is laid on the proper treatment of the condition and this is given in detail. Early attention to the condition may be life saving not only to the mother, but also to the child. The papers of E. J. Ole and A. J. Rougy on the treatment of albuminuria and toxemias of pregnancy are valuable, practical helps.

Materia Medica and Therapeutics, Preventive Medicine, and Climatology. Volume VIII of The Practical Medicine Series. Edited by George F. Butler, Ph. G., A.M., M.D., Henry B. Favill, A.B., M.D., and Norman Bridge, A.M., M.D. Chicago Year Book Publishers. Price, $1.35.

In this volume a very extended review of the experience of physicians all over the world, with the arsenicals and their derivatives is given. This review is most valuable at this time for the reason that arsenic in its various forms is now being used extensively in the treatment of disease and this summary will enable the physician to determine its indications and contraindications. Another valuable summary is that on benzol in the treatment of leukemia, it still seems to be a "two-edge sword."

Nervous and Mental Diseases. Volume X of The Practical Medicine Series. Edited by Hugh T. Patrick, M.D., and Peter Bassoe, M.D. Chicago: The Year Book Publishers. Price, $1.35.

The most valuable feature of this volume is an extensive summary of the modern aids in diagnosis and treatment of syphilitic diseases of the nervous system. A number of interesting case reports accompany this summary showing that implicit reliance cannot be placed on the laboratory findings and again in other cases they are most valuable in elucidating an obscure diagnosis. The results of the intraspinal treatment of the disease by the various methods is fully presented. This is a timely review and one which physicians generally will welcome.

Materia Medica and Therapeutics. A Text Book for Nurses. By Linette A. Parker, B.Sc., R.N., Instructor in Nursing and Health, Teachers' College, Columbia University. 12mo, 311 pages, illustrated with 29 engravings and 3 plates. Cloth, $1.75 net. Lea & Febiger, Publishers, Philadelphia & New York, 1915.

In this little volume the essentials of materia medica and therapeutics are presented to the nurse in a way that is not only instructive but quite interesting as well. Without going into detail, let it be said that the author presents the subject quite fully and has included everything that an up-to-date text book for nurses should contain. The illustrations are really splendid.

The Care of the Baby. A Manual for Mothers and Nurses, Containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. Crozer Griffith, M.D., Professor of Pediatrics in the University of Pennsylvania. Sixth Edition, thoroughly revised. 12mo of 463 pages, illustrated. Cloth, $1.50 net. W. B. Saunders Company, 1915.

Any book that can boast of a sixth edition speaks for itself. Suffice it to say that this is one of the very best practical books on the baby and how he should be cared for known to us. If in every household in which there is a baby a copy of this book were introduced and those responsible for the care of the baby were to carry out the instructions laid down so simply by the author, our aim for better babies would soon be realized.

The Starvation Treatment of Diabetes. With a Series of Graduated Diets as Used at the Massachusetts General Hospital. By Lewis Webb Hill, M.D., and Rena S. Eckman, Dietitian. With an introduction by Richard C. Cabot, M.D. Price, $1.00. W. M. Leonard, Publisher, Boston, 1915.

One of the most notable contributions on the subject of diabetes is this recent work of Allen's on the treatment of diabetes. His new system of therapy is rapidly becoming the accepted method of procedure in all clinics and in the private practices of the leading internists—in this country, at least. Any physician can learn the details of this new system of treatment from this little monograph. The author's purpose in issuing this book was to furnish the general practitioner these details in compact form. The physician who wants to introduce this method of treatment in his practice will learn in this book just what to do, and to him this little volume will be invaluable.

Infection, Immunity and Specific Therapy. A Practical Text-Book of Infection, Immunity and Specific Therapy, with Special Reference to Immunologic Technic. By John A. Kolmer, M.D., Dr.P.H., Instructor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M.D., Professor of Pathology, University of Pennsylvania. Octavo of 899 pages, with 143 original illustrations, 43 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $6.00 net; half morocco, $7.50 net.

This book on infection, immunity and specific therapy is a most desirable text for the intelligent practitioner of medicine, because it gives the present status of our knowledge of the various phases of immunity and serum therapy in which rapid advances have been made. On account of the complete and exact technic of tests and reactions in serologic and immunologic work, this book is of great value to the laboratory worker.

The Medical Clinics of Chicago. Volume 1, No. 2. (September, 1915.) Octavo of 194 pages, 44 illustrations. Philadelphia and London: W. B. Saunders Company. Published bimonthly. Price per year, paper, $8.00; cloth, $12.00.

In this number the clinics are of unusual quality and merit. Almost every page of this volume is full of important information for the general physician. After reading Abt's talk on tuberculous meningitis, Pusey's on Roentgen ray and epithelioma, Tice's on infantilism, Hamburger's on cardiac neurosis and auricular fibrillation, Preble's on syphilitic aortitis, Goodkind's on splenic enlargement, and Mix's on duodenal ulcer, one cannot help but feel that he has learnt about each of these subjects an indefinable something that no textbook imparts. The personality of the lecturer seems to pervade every line of his subject. How much this helps to make these clinics so intensely interesting and so valuable is impossible to exaggerate!

A Medical Dictionary for Nurses. Giving the Definition, Pronunciation, and Derivation of Terms Used in Medicine, Together with Supplementary Tables of Weights, Measures, Chemical Symbols, Etc., Arranged with Special Reference to Use by Nurses. By Amy B. Pope. G. P. Putnam's Sons. New York and London: The Knickerbocker Press.

Undergraduate and graduate nurses will find this volume a very practical handbook not only for use as a dictionary but also as a reference book of general medicine. The definition of the nonimportant words is detailed in such a way that a clear conception is readily obtained of the idea which the word should convey. Naturally, the book does not contain all the words found in a medical dictionary, but it does contain the commoner medical terms with which a nurse comes in contact in her daily work and in the conversations she may have with the attending physician. The appendix contains a number of very valuable tables for which the nurse on duty will find almost daily use.

Medical Jurisprudence. A Statement of the Law of Forensic Medicine. By Elmer D. Brothers, B.S., LL.B., Member of the Chicago Bar, Lecturer on Jurisprudence in the Medical and Dental Departments of the University of Illinois, and in John Marshall Law School. C. V. Mosby Company, St. Louis, 1914.

This work is a decidedly valuable contribution to medical literature. It is true that many more pretentious works on this subject have appeared, but none have presented the legal phase of the subject in as clear and interesting a manner as the book under discussion. Chapter 3, dealing with the general question of evidence, and No. 4 with that of the expert witness, are exceedingly good. The definitions are clear, and the subject matter is arranged in a very pleasing way. Other parts of the work are equally interesting, but space will not allow detailed discussion. To the reviewer, this is one of the best arranged books on the subject of Jurisprudence that he has had the pleasure of reading.

Outlines of Internal Medicine. For the Use of Nurses. By Clifford Bailey Farr, A.M., M.D., Instructor in Medicine, University of Pennsylvania. 12mo, 408 pages, illustrated with 71 engravings and 5 plates. Cloth, $2.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

The important subject of internal medicine is here presented in a novel way. The book is divided into ten parts. Two of these parts deal with diseases due to harmful agencies, and the other eight deal with diseases of the various systems. Thus the general arrangement of the book has been well planned. The subject matter is presented briefly, but thoroughly enough for the nurse to grasp the fundamental ideas underlying medicine. The illustrations are unusually good. A book of so much merit ought to enjoy a wide popularity among nurses.

A Synopsis of Medical Treatment. By George C. Shattuck, M.D. Second Revised Printing of the Second Edition. Price, $1.25. W. M. Leonard, Boston, Publisher.

The surprising feature of this little book of 185 pages is that so much of real value to the busy practitioner can be incorporated in such a small book. Furthermore, the fact that the book has been prepared by one of the best teachers and clinicians, primarily for use in the Harvard Medical School, and secondarily for the use of busy men who can make use of an authoritative synopsis of medical treatment, is quite sufficient to recommend it. That the book has met with the approval of a large number of men is evidenced by the fact that the two editions have required reprinting in order to supply the demand.

The Treatment of Fractures. With Notes Upon a Few Common Dislocations. By Charles L. Scudder, M.D., Surgeon to the Massachusetts General Hospital; Associate in Surgery at the Harvard Medical School. Eighth edition, revised and enlarged. Otavo volume of 734 pages, with 1057 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Polished buckram, $6.00 net; half morocco, $7.50 net.

Reviews of previous editions of this work have appeared in the pages of The Journal. This new edition incorporates the changes and advances made in the few years that have elapsed since the last edition. It contains new material on fractures of the jaw, the acetabulum, the greater tuberosity of the humerus, and the separation of the lower epiphysis of the femur. Many new illustrations have been added. The reputation of this book as one of our recognized standard texts on the subject of fractures has already been established and is being upheld by each succeeding edition.

Progressive Medicine. Volume XVIII. No. 3, September, 1915. Edited by Hobart Amory Hare, M.D., and published by Lea & Febiger, Philadelphia.

This volume is made up of the reviews of only four contributors. A third of the volume is taken up by Ewart with his discussion on diseases of the thorax and its viscera, including the heart, lungs, and bloodvessels. The author devotes considerable space to the subject of pulmonary tuberculosis. A subject of such vital importance surely deserves a full and careful review.

Gottheil's review of dermatology and syphilis is not only very interesting but it is replete with valuable practical information for the reader to absorb.

Another third of this volume is taken up by Davis with his review of obstetrics.

The concluding review is on diseases of the nervous system by Spiller. The great interest now taken in the subject of syphilis and parasyphilis and in intraspinal therapy is reflected in the careful and detailed attention devoted to these subjects in the review.

Clinical Diagnosis. A Manual of Laboratory Methods. By James Campbell Todd, M.D., Professor of Pathology, University of Colorado. Third edition, revised and enlarged. 12mo of 585 pages with 176 text-illustrations and 13 colored plates. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $2.50 net.

The fact that this manual has gone through three editions in the past six years is good evidence of the regard in which it is held by physicians. One of the most commendable features of the book is the simplicity of the methods given, for carrying out the various clinical laboratory tests. It is obvious that the book is not intended for the trained laboratory worker, but for the practicing physician who wants to give his patients the benefit of more accurate diagnoses. The volume is very well illustrated with cuts which really illustrate. No attempt is made to give the detailed clinical significance of findings inasmuch as this would make the book too large for

the purpose for which it is intended. The practicing physician will find the work one of the best of its kind.

Diabetes Mellitus. Designed for the Use of Practitioners of Medicine. By Nellis B. Foster, M.D., Associate Physician to the New York Hospital. J. B. Lippincott Company. Price, $3.00.

The modern literature on diabetes has become so voluminous and there is so much chaff amongst the wheat that a volume such as this, which sums up and puts into practical available form the discoveries and advances, is very welcome.

The known facts regarding normal metabolism are given, and when facts are lacking to bridge the chain, a reasonable theory is offered to fill the gap. The various forms of experimental glucosuria are discussed, and the data from them correlated with the clinical and experimental data gained from diabetes in man.

A chapter worthy of special mention is that on acidosis in which the latest conceptions of the condition are detailed.

The chapter on treatment is a most practical one. Nothing new or startling is offered, and it is admitted that diet is the sine qua non, nevertheless, this is presented in such a way as will enable the physician and patient to do away with troublesome weighing, usually necessary to carry out the dietetic treatment in an intelligent manner.

The book is a good modern critical presentation of the subject of diabetes.

Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., formerly Professor of Psychiatry, Columbia University. Eighth edition, revised. Octavo volume of 940 pages, with 350 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.00 net; half morocco, $6.50 net.

Nothing need be said by way of introduction of the authors of this well-known book. The eighth edition is in keeping with the excellency of the former editions. As is said in the preface, only a few material changes have been made. The section on Syphilis of the Nervous System is one which has received the attention of the authors. One is not a little surprised in finding only small mention of the use of salvarsan generally, and of salvarsanized serum, into the spinal column especially, in the treatment of nervous syphilis as well as tabes and general paresis, in view of the very good reports coming in from all sections of the world on the use of this treatment. The combining of a complete work on nervous diseases and one equally complete on psychiatry, into one volume is an admirable feature of the work. The book is made up with the usual degree of excellence of Saunders' publications, and is a very valuable addition to the literature on neurology.

Cancer: Its Study and Prevention. By Howard Canning Taylor, M.D., Gynecologist to the Roosevelt Hospital, New York; Professor of Clinical Gynecology, Columbia University; Member American Society for the Control of Cancer, etc. 12mo, 330 pages. Cloth, $2.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

This book contains a good résumé of our general knowledge of cancer. The author has nothing that is really new to present, but he has succeeded in embodying in his work the essential points of practical importance in reference to malignant disease. He presents the subject in its broader aspects and brings out many of its phases that are of importance not only to the physician but to the laity as well. However, the book strikes one as being too technical, too much like a text-book, to become popular among the laity, and since it contains nothing that the average medical man does not already know it is possible that the book may not enjoy a very wide popularity among the profession. Nevertheless, it must be admitted that any good work on the subject of cancer is a welcome addition to the literature on this subject, especially one that serves to summarize our present general knowledge in a clear and concise presentation. There is this much, at least, to be said in favor of this volume, and for this reason we do not hesitate to recommend it to every physician interested in the subject of cancer.

Simplified Infant Feeding with Seventy-Five Illustrative Cases. By Roger H. Dennett, B.S., M.D., Adjunct Professor of Diseases of Children, New York Post-Graduate Medical School; Attending Physician of the Children's Department, New York Post-Graduate Hospital; Assistant Attending Physician at the Willard Parker Hospital and the Red Cross Hospital, New York. Volume of 355 pages with fourteen illustrations. Cloth, $3.00. Philadelphia and London: J. B. Lippincott Company, 1915.

In this book the author has attempted to leave out the "theory" as much as possible and to make use of facts and rules wherever they could be made to apply in the subject of infant feeding. He claims that in carrying out the "system" described in this book he has seen excellent results in his practice. The cases he gives as illustrations bear out his claim. The way in which the author handles his subject indicates beyond doubt that he is an authority in his specialty. His strong argument for "boiled milk" appeals to one as having a great deal of force. Perhaps the best feature in the book is the way in which the author tells you how to feed the infant. He does not tell it to you in a general way, he gives it to you in detail. To the physician who is called on to decide such problems this book will be a great help. Of the many volumes on infant feeding that now glut the market, this one stands out as a book of real merit, one for which there really ought to be a wide demand.

Exercise in Education and Medicine. By R. Tait McKenzie, B.A., M.D., Professor of Physical Education and Director of the Department, University of Pennsylvania; Fellow of the College of Physicians of Philadelphia and of the American Academy of Physical Education; President of the American Physical Education Association, 1913-1915; President of the Society of Directors of Physical Education in Colleges, 1912; some time Lecturer in Anatomy and Medical Director of Physical Training at McGill University; Lecturer in Artistic Anatomy, Montreal Art Association, Harvard Summer School, and Olympic Lecture Course, St. Louis, 1904; M. P. E., Springfield College. Second Edition, thoroughly revised, with 478 illustrations, price $4, cloth. W. B. Saunders Company, 1915.

Exercise is discussed in this book in the systematic manner that an art or a science of its importance

deserves. The first part — embracing more than half of the volume — deals with the rôle of exercise in education, and the second part deals with the value of exercise in medicine. The work is thus well planned, and the subject matter presented in such fascinating style that the attention and interest of the reader is sustained from "cover to cover."

The book has been rewritten almost completely and has been so enlarged as to make it a very complete practical treatise. To all those for whom such a work is intended, i. e. students and practitioners of physical training, teachers of the youth, students and practitioners of medicine will find it extremely interesting and of much more practical value than they would probably expect.

Diarrheal, Inflammatory, Obstructive, and Parasitic Diseases of the Gastro-Intestinal Tract. By Samuel Goodwin Gant, M.D., LL.D.; Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus at the New York Post-Graduate Medical School and Hospital. Octavo of 604 pages with 181 illustrations, cloth $6. W. B. Saunders Company, 1915.

Not many would have thought that the subject of diarrhea is so comprehensive and so important as to warrant the publication of a book of this magnitude for its discussion. That this is really so is demonstrated by the book itself. It is an exhaustive study of the diarrheal diseases of man. All the diseases in which diarrhea is a prominent symptom are given, and those which are regarded as essential diarrheal diseases are discussed quite fully from the etiological, pathological and clinical standpoint.

The author's attitude toward emetin in amebic dysentery as indicated by his statement "no specific drug for entamoebic dysentery has yet been discovered" is open to criticism, for many clinicians now regard emetin as a real specific in amebic infection.

The use of antidysenteric serum in the treatment of bacillary colitis is given the emphasis it deserves.

The chapter on "intestinal gonorrhea" is quite interesting. This terminology is "a new one" to many of us.

The "formulary" incorporated in this work to serve the needs of the busy physician contains some twelve pages of prescriptions, etc., a very valuable and useful feature.

The book ought to be very interesting and helpful to every class of medical practitioner.

Operative Gynecology. By Harry Sturgeon Crossen, M.D., F.A.C.S., Associate in Gynecology, Washington University Medical School, and Associate Gynecologist to the Barnes Hospital; Gynecologist to St. Luke's Hospital, Missouri Baptist Sanitarium, and St. Louis Mullanphy Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians and Gynecologists. 770 original illustrations. Cloth, $7.50. St. Louis, C. V. Mosby Company, 1915.

In this volume of 670 pages the operative treatment of gynecological disorders is discussed in all its details. The indications for operation in the various diseases are given, the selection of the method of procedure best suited to the individual case is discussed, and the technic of the different operations is described. It is a well-planned work, and the subject-matter is presented in a concise, forcible manner.

Transplantation of the ovary is discussed quite fully and in a way that makes this chapter one of the strongest in the volume.

The author's views on gonorrheal pelvic disease—a subject in which he seems to take special interest—will no doubt be generally accepted without criticism.

The list of recorded cases in which sponges, forceps, scissors, clamps, etc., were left in the abdomen by various operators—many of them of world-wide fame—will be read by every one with the greatest interest.

The chapter on "Medico-Legal Points in Gynecological Surgery" certainly adds enormously to the practical value of the work.

The book is profusely illustrated by 770 original, beautiful illustrations. It would be impossible to exaggerate the importance and the real value of these illustrations.

Differential Diagnosis. Volume II. Presented Through an Analysis of 317 Cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine Harvard University Medical School; Boston Chief of the West Medical Service. Profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1915.

The man who has the genius to present the study of diagnosis from a new viewpoint deserves great credit and the man who popularizes the method deserves great credit also. While Dr. R. Cabot was not the originator of presenting the subject of differential diagnosis by detailed case histories, yet he has done a great deal to popularize the method, and he has worked out the practical details of presenting the subject by case histories in such a way that the study of differential diagnosis becomes a great pleasure. Furthermore, the subject is presented in the natural way, that is, just as we meet it in everyday work. The relative importance of single signs and symptoms, the grouping of signs and symptoms, their sequence, the bearing the history has on signs and symptoms, are freely discussed in each case.

The present volume takes up nineteen additional symptoms, analyses and illustrates them by 317 detailed case histories. The symptoms discussed are: abdominal and other tumors, vertigo, diarrhea, dyspepsia, hematemesis, glands, melena, swelling of the face, hemoptysis, edema of the legs, frequent micturition and polyuria, fainting, hoarseness, pallor, swelling of the arm, delirium, palpitation, and arrhythmia, tremor, ascites and abdominal enlargement.

Of particular value are the brief discussions at the beginning of each chapter of the symptoms under consideration. This volume is a fitting companion to the first volume and it is to be hoped that more will follow.

Practical Materia Medica and Prescription Writing. By Oscar W. Bethea, M.D., Ph.G., F.C.S., Assistant Professor of Materia Medica and Instructor in Prescription Writing, Tulane University of Louisiana. 550 pages. Cloth, $4.00. F. A. Davis & Company, Publishers, Philadelphia, 1915.

The exception to the rule proves the value of this book, for, unlike most works on materia medica, the author has made his book of more practical value by impressing on the reader the precautions to be observed in prescribing certain drugs, whether singly or in combination, and what forms or preparations will best meet the demands of particular conditions.

Attention is also given to the manner of ordering medicines that will prove the safest as well as the most convenient and agreeable for administration, together with the hours of administering, and many other matters which are of practical importance to the physician.

As an example of ignorance which often prevails, the author says that many students are taught that iron is the proper drug to prescribe to effect a certain change in the blood condition, but often nothing is said about the particular form of iron that is best adapted to meeting the demands of the particular condition to be treated, the precautions to be employed, the manner in which the preparation is to be prescribed, and how it is to be administered in order to be most agreeable as well as efficient.

A considerable part of the book is devoted to prescription writing, and this feature has been handled in a very satisfactory way by discussing all of the points that enter into prescription writing and elucidating the text with numerous illustrations showing types of good and bad prescription writing, and criticisms concerning various combinations.

While the work will be found of special value to the student, it also will be of interest to many physicians whose knowledge of materia medica and prescription writing is of the elementary type, and no physician will find such a practical work superfluous if he desires to reflect credit on himself and serve the best interest of the patient as a result of possessing a working knowledge of materia medica and prescription writing as taught in this book.

Principles of Human Physiology. By Ernest H. Starling, M.D. (Lond.), F.R.C.P., F.R.S., Hon. M.D. (Breslau), Hon. Sc.D. (Cambridge and Dublin). Jodrell Professor of Physiology in University College, London. Second Edition. 1272 pages, with 566 illustrations, 10 in color. Cloth, $5.00. Lea & Febiger, Publishers, Philadelphia, 1915.

Physiology, like other sciences, is making advances constantly and this fact is evidenced by changes that were required in order to make this second edition of Professor Starling's excellent work come up to date. In addition to the numerous changes that have been made, new sections have been introduced dealing with the nutrition of the brain and with the innervation of the bronchi. There is, throughout the entire work, an exemplification of comprehensiveness and accuracy. "The author has laid special stress on the significance of the data of physiology and made an attempt to weave them into a fabric representing the principles which are guiding physiologists and physicians of the present day in their endeavors to extend the bounds of the known and to increase their powers of control over the functions of living organisms." He has, moreover, sought to show that the only foundation for rational therapeutics is a proper understanding of the working of the healthy body, and, as he says, "until we know more about the physiology of nutrition, quacks will thrive and food faddists abound. Ignorance of physiology tends to make a medical man as credulous as his patients and almost as easily beguiled by the specious puffings of the advertising druggist."

While admitting that those who are acquainted with physiology as taught in primers will not find this book of special interest, yet he hopes that it will be found of value, not only to the candidate for a university degree, but also to the practitioner of medicine in equipping him for his struggle against the factors of disease.

The volume is divided into four parts: first, general physiology, in which the basis of the body is discussed in numerous chapters; second, the mechanisms of movement and sensation; third, the mechanisms of nutrition; fourth, reproduction. The chapters covering the mechanisms of nutrition are especially interesting and show results of the progress that has been made through the study of this subject. The entire volume is an excellent presentation of the subject considered.

Modern Aspects of the Circulation in Health and Disease. By Carl J. Wiggers, M.D., Assistant Professor of Physiology in Cornell University Medical College. Octavo, 378 pages, illustrated with 104 engravings. Cloth, $3.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

A good treatise on the circulation at this time, when there is so much real interest in this subject, is most desirable. This work of Professor Wiggers gives us a clear presentation in which is embodied every important feature that has been contributed to this branch of scientific medicine up to the present time.

The subject matter is given in three sections: Section 1 deals with the physiology of the circulation. It contains chapters on the dynamics and mechanics of the heart beat, on the physics of the blood flow through the organs, on the physics and physiology of the lesser circulation, on the respiratory variations of arterial pressure, and on other matters that enter into a discussion of this kind.

Section 2 deals with graphic methods for clinical use. In it the author discusses arterial and venous pulse tracings and gives descriptions of methods and apparatus by which such tracings may be obtained. The apex beat, with the graphic record of its impulse, the cardiogram, and the clinical value of such a record, are considered. The electrocardiogram and the phonocardiogram, which in the past few years have become of increasing importance in the clinical study of cardiovascular derangements, and the methods by which these records may be obtained are described with all the detail needed to make the subject comprehensible to the average physician and to the student. In this section is also given the physics of sphygmomanometry, or the clinical estimation of blood pressure in man, with the apparatus and technic employed in making blood pressure estimations. Not only arterial but venous blood pressure, as well, is given the attention it deserves. The clinical use of the Roentgen ray in its relation to this subject is discussed in this section, and ought to be read by every physician who really wants better to understand cardiac pathology.

Section 3 deals with diseases of the circulation. Here are discussed not only those subjects usually found in texts of this sort, such as heart-block, the arrhythmias, etc., but also such conditions as the thyroid heart, the anaphylactic heart, the heart in severe acute infections, the heart in plethora, oliguria, shock and hemorrhage, and so on.

Some idea of the nature and scope of this work may thus be obtained. It is a real mine of valuable information on a subject of vital importance. Every clinician is advised to get this book and to become thoroughly acquainted with its contents without delay.

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LOCAL ANESTHESIA

ITS SCIENTIFIC BASIS AND PRACTICAL USE

By PROF. DR. HEINRICH BRAUN
Obermedizinalrat and Director of the Kgl. Hospital at Zwickau, Germany
Translated and Edited by PERCY SHIELDS, M.D., Cincinnati, Ohio, from the Third Revised German Edition

Octavo, 399 pages, with 215 illustrations in black and colors. Cloth, $4.25 net.

The writer of this work, Professor Braun, has justly been called "the father of local anesthesia." The object in placing his work at the command of the English-speaking surgical profession is to systematize the vague, erratic and unsatisfactory efforts which have been made in this field for many years, by offering a logical procedure based upon scientific facts and having an exact and undeviating technique.

It was only after the discovery of the active salts of the suprarenal gland that the progress of local anesthesia became assured, for without its use, anesthesia sufficient for surgical purposes was impossible. The profession must and will accept a method of anesthesia which has no mortality, and will use it in many cases which are today being operated upon under general anesthesia. Leaving the many other advantages of local anesthesia out of consideration, the absence of mortality and injury to the tissues, should give it a permanent place in surgery.—*From the Preface.*

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ORIGINAL ARTICLES

THE RELATION OF THE SPLEEN TO CERTAIN ANEMIAS *

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The story is told of a professor of physiology who asked a medical student what was the function of the spleen and received the reply "I did know but have forgotten." The professor said: "It is a great pity you have forgotten, because no one else has ever known." Recently, however, as a result of the study of the pathology of the living, largely from material obtained at the operating table, more accurate knowledge of the function of the spleen has been gained although in this we are still wofully lacking as compared to our knowledge of the other organs of the body.

THE RELATION OF THE SPLEEN TO THE LIVER AND DIGESTIVE TRACT

The spleen and liver are closely associated in function. The liver is essential to life, the spleen is not. The liver acts as a gigantic means of defense against poisons, both parasitic and chemical, which would otherwise reach the general circulation from the gastrointestinal tract through the radicals of the portal vein. This is well shown in cancer of the rectum and intestine, which through the portal circulation, often develops embolic processes in the liver though seldom in the lung. Cancer of the stomach, on the other hand, by reason of direct communications with the general circulation through the diaphragm as well as through the portal vein frequently develops secondary cancer in the lungs as well as in the liver.

The splenic artery arises from the celiac axis, the same source which supplies the pyloric end of the stomach and upper duodenum, the liver and pancreas, all of which are derivatives of the foregut, and all organs concerned in the proper preparation of food products for digestion and absorption, as in them also the venous return of the spleen becomes part of the portal circulation. The vascular system of the spleen is large and is curiously arranged, inasmuch as the walls of the blood vessels, except the endothelial lining, are absent and the blood comes in direct contact with the splenic pulp.

The spleen contains a considerable amount of non-striated muscle fiber and elastic tissue, but only a very scanty supply of nerve tissue, and that largely from the sympathetic. Every organ of important internal secretion is very closely, if not organically associated with sympathetic nerve tissue. Note the adrenals and hypophysis, part glandular and part sympathetic ganglia. This close relationship of the glandular secretion with the sympathetic nervous system enables widespread effect, so that the internal secretions may be said to play on the sympathetic nervous system as the fingers play on a piano. The scanty nerve supply of the spleen shows that it does not produce an important internal secretion. Its function must be closely associated with metabolism, shown by enlargement during the digestive period and contraction following digestion. That these physical changes are brought about through the blood stream seems assured, since epinephrin solution in the circulation will cause the spleen to contract one third in size, as noted by Elliott and Kanavel.[1]

The idea that the spleen is an obsolete organ of little function is not tenable, as Eccles[2] has

* Address delivered before the Indiana State Medical Association, Sept. 23, 1915.

1. Elliott, C. A., and Kanavel, A. B.: Splenectomy for Hemolytic Icterus, Surg., Gynec. and Obst., 1915, xxi, 21.
2. Eccles, R. G.: The Tonsils and the Struggle for Existence, Med. Rec., New York, 1915, lxxxviii, 47.

pointed out. The outstanding fact in a retrogressing organ is the reduced blood supply. The tonsils, for example, were at one time supposed to be retrogressive, but the fact that the tonsil has five sources of blood supply shows that it is not obsolescent, yet it is not essential to life and when diseased has great potentiality for harm. This is quite analogous to the spleen.

It would appear that the spleen removes from the circulation not only cellular elements of definite food value, but also, when unable to properly care for these products, sends them to the liver for elaboration into energy-producing substances, on the one hand, and destruction of various toxic agents on the other, that nothing of value may be eliminated and that dangerous products, wherever produced, may be rendered harmless.

The relation of all animal life to food supply is of first importance. It is a trite saying that nature abhors waste. The amount of energy nature can produce in the living with a limited amount of food has no imitators in man's handiwork. One must confess that whatever his mental and moral deficiencies, and they are certainly great, as a machine, man has no equal. The degenerated cellular elements from the blood and even the food values of ingested parasites are conserved. It has been shown that the phagocytes of the body depend, to a considerable extent, on ingested bacteria for their nutrition (Hiss[3]), Stohrs and Adami have shown that the leukocytes of the body pass out on the free surface of the intestine and return loaded with bacteria and particles of fat, and that the pigmented areas of the liver are derived from the coloring matter of slaughtered bacteria. In the same manner the fluids of the intestinal tract are redistilled in the proximal colon after being used mechanically to float the food products down the small intestine and, that nothing may be wasted, bring them in contact with the valvulae conniventes, which are to man what roots are to a tree.

The close association of cirrhosis of the liver with enlargements of the spleen has long been noted. In primary cirrhosis of the liver the spleen is enlarged and in splenic anemia with splenomegalia the terminal stage shows cirrhosis of the liver. In some cases, much difficulty is experienced in determining whether the hepatic cirrhosis is primary and the splenomegalia secondary, or the contrary. Nearly thirty years ago Gregory[4] rather picturesquely stated that nature had three ways of protecting the organism against noxious agents: First, by absorption, destruction and elimination through natural processes; second, by encapsulation of such harmful substances as it was unable completely to destroy or eliminate, of which the encysted bullet is a gross example; and third, by extrusion, as in the spontaneous opening and discharge of infective organisms in phlegmons. It would seem probable that in cirrhosis of the liver the second of these methods was in operation. It has been suggested that in chronic alcoholism, for example, the liver, finally unable to destroy and eliminate, attempts to encapsulate a diffuse poison and that the contraction of this scar tissue produces the cirrhosis. But cirrhosis of the liver is by no means confined to alcoholics. It is often seen in comparatively young people and those who have never used alcohol. It probably would not be far wrong to say that certain toxic substances circulating in the blood may be gathered into the spleen and sent thence to the liver for destruction, and that chronic hepatic insufficiency might eventually lead to the production of cirrhosis of the liver, on one hand, and, on the other, show its effect on the spleen, as a splenomegally with resulting anemia, as, no matter what the cause of the splenic hypertrophy may be, an increased capacity for destruction of the red cells seems liable to develop. Syphilitic cirrhosis of the liver with splenomegalia is an example of the nonalcoholic type of disease and splenectomy in these cases promptly relieves the anemia, although the spleen itself, on pathologic examination, may show no evidence of spirochetal action.

Certain it is that the removal of the spleen has been of very great benefit in some cases of cirrhosis of the liver, especially of the Hanot type. These experiences, however, have been too recent to enable any conclusion to be drawn, but among the group of splenic anemias in which a greatly enlarged spleen has been removed and cirrhosis of the liver was present with ascites, etc., patients have been apparently cured, and the cures have now lasted long enough to enable us to say that at least the cause of a progressive and heretofore fatal malady has been removed. We could not expect a cirrhosed liver to return to normal, but the progress of the cirrhotic process has been interrupted and the remaining hepatic tissue

3. Hiss, P. H.: Some Problems in Immunity and the Treatment of Infectious Diseases, Arch. Int. Med., July, 1909, p. 32.

4. Gregory, E. H.: Cell Antagonism, The Journal A. M. A., June 11, 1887, p. 645.

has been sufficient to carry on function. Of the important organs of the body, the liver is one of the few which has the power of regeneration. If half of the liver of a dog be removed, it will be restored in a few months. In the kidney regeneration does not take place. It is rather a hypertrophy of the original tissue of the kidney than a true reproduction of lost tissue from existing tissue which occurs under similar experimentation.

If we accept the idea that the spleen removes from the blood noxious agents, are we to conclude that all the circulatory blood must go through the spleen for this purpose; or is there an attraction between organs and the arterial supply of the body, that is, do certain organs definitely attract substances circulating in the blood? Rosenow[5] has shown, for example, that the streptococci cultured in the gallbladder are definitely attracted to the gallbladders of experimental animals when injected into the circulation. This is also equally true of other organs—the appendix, the stomach, etc., so that he has been able to produce definite infections of organs with injections of bacteria properly cultured.

THE RELATION OF THE SPLEEN TO THE BLOOD

The spleen is found in all red-blooded animals. The ancestral blood corpuscle, from which both red and white have their origin, is probably the mesenchyme cell, a form of lymphocyte which appears first in the fetal blood. The most primitive blood is therefore white blood. This is found in the fetus before the red blood appears. All animals that have only one kind of blood have white blood. As the scale of animal life ascends, red blood begins to appear and nearly all the conditions of the blood of the different anemias is the normal blood of some of the lower animals. In fetal life all of the lymphoid and adenoid structures of the body, the bone marrow, the spleen and in its early stage, probably also the liver, are blood-forming organs. The liver loses this function long before birth. In leukemia, all of these primitive organs, including the spleen and liver, for some unknown reason, begin to produce embryonic white blood, just as in cancer there is an unlimited production of embryonic epithelial cells, and in sarcoma of embryonic connective-tissue cells. After birth, the spleen continues to produce a certain number of leukocytes, as shown by the fact that the splenic vein contains a higher percentage of leukocytes than the other veins of the body, but does not produce erythrocytes. Osler[6] states that after severe hemorrhages the spleen may temporarily produce red cells.

It has also been definitely shown that worn out red corpuscles are strained out in the spleen and destroyed; thus the splenic vein contains a higher percentage of hematin than other veins of the body. In disease we may surmise that excess of splenic function destroys red corpuscles which are not worn out and the condition becomes one which we speak of as splenic anemia or hypersplenism, and that the exceedingly rare condition of excess of red cells in the blood called polycythemia may be due to deficiency of function of the spleen and associated organs—a hyposplenism.[7] This explanation, however, is undoubtedly too simple and does not take into account the possibility of the spleen interfering in some unknown manner with the production of red cells in the bone marrow. It is more probable, however, that in certain conditions of disease red cells are sensitized in other tissues, as shown by the increased fragility of the red cells (Chauffard[8] and Widal[9]), and are then destroyed in the spleen. Since, when the spleen is removed in cases of primary anemia, pernicious anemia and in hemolytic jaundice, it is found crowded with disorganized erythrocytes, this hypothesis seems the more logical.

Of great significance is the knowledge that the spleen and possibly other organs, of themselves not necessary to life, may be *the* link easily broken in an otherwise fatal chain. From the fact that the spleen is not necessary to life and yet that its removal may definitely check certain hopelessly progressive blood dyscrasias, one must conclude that the spleen is not the cause but rather the agent of destruction, as in hemolytic jaundice, and that when the spleen is removed the noxious substances are rendered innocuous elsewhere under more favorable conditions, although what becomes of these toxic agents after the spleen is removed we have no means of knowing. Be this as it may, clinical

5. Rosenow, E. C.: Bacteriology of Cholecystitis and Its Production by Injection of Streptococci, The Journal A. M. A., Nov. 26, 1914, p. 1835.

6. Osler, W.: The Principles and Practice of Medicine, New York, D. Appleton & Co., 1912.

7. Hemolytic Jaundice and Splenectomy, Editorial, The Journal A. M. A., June 17, 1915, p. 255.

8. Chauffard, A.: Pathogénie de l'ictère congénital de l'adults, Semaine Méd., 1907, No. 3, 25; Les ictères hémolytiques, ibid., January, 1908; Cholélithiase pigmentaire dans un cas d'ictère congénital hémolytique; analyse chemique des calculs, Bull. et mém. Soc. méd. de Hôp., 1912, xxxiv, 80. Cited by Elliott and Kanavel, Note 1.

9. Widal, A., and Brulé: Differenciation de plusieurs types d'ictères hémolytiques, Presse méd., 1907, lxxxi, 641. Cited by Elliott and Kanavel, Note 1.

experience has definitely shown that many of those anemias associated primarily with an enlarged spleen and secondarily with cirrhosis of the liver are definitely cured by removal of the spleen.

ANEMIAS OF POSSIBLE SPLENIC ORIGIN

In grouping these anemias much difficulty is experienced and the accepted terms of designation concern, to a great extent, syndromes.

Splenic Anemia.—The group called the splenic anemias shows rather a definite clinical picture, for example, secondary anemia, leukopenia, enlarged spleen, hemorrhage from the stomach and, in the late stages, the characteristics described by Banti,[10] cirrhosis of the liver, ascites, etc., a disease most common in young adults. Children, however, are not infrequently subject to the disease of the adult type and it is possible that the "pseudoleukemic anemia" of infants or von Jaksch's disease is also a manifestation of the same condition (Giffin[11]). In von Jaksch's disease there is a leukocytosis which is chiefly a lymphocytosis together with a diminution of erythrocytes, a large spleen and cachexia. In this condition infants, for physiologic reasons, usually show an excess of leukocytes up to 30,000 or more, older children more often developing the condition seen in adults with leukopenia, but even in adults the leukocytes may be in excess in otherwise typical cases of splenic anemia.

In our clinic to Sept. 20, 1915, seventy-one splenectomies have been performed with six deaths. Twenty-nine were in cases of definite splenic anemia. All the patients recovering from the operation, with five exceptions, have remained quite well in spite of the fact that some were in the late stages of the disease, that is, markedly advanced hepatic cirrhosis, ascites, and jaundice (Giffin[12]).

Gaucher's Disease.—Gaucher's disease or large-cell splenomegalia is closely associated with splenic anemia and early removal of the spleen will probably cure the condition. Gaucher's disease is characterized by a slowly growing spleen, which eventually becomes of great size, with secondary anemia and, in the terminal stages, the characteristic endothelial growths appear in the liver, lymphnodes and bone marrow. According to Brill and Mandelbaum,[13] it always begins before the thirteenth year and averages twenty years before a fatal termination, usually a terminal complication.

Hemolytic Jaundice.—That hemolytic jaundice, in the great majority of cases, is due to hypersplenism may now be accepted. Whether the spleen is acting on its own initiative or through stimulation of the blood in destroying the red cells we have at present no definite knowledge.

Five patients with hemolytic jaundice have been operated on in our clinic. None of these cases was of the familial type, though all had begun in childhood. In this condition there is an enlarged spleen and constant moderate jaundice of the acholuric type, that is, there is bile in the stool, absence of itching of the skin and freedom from all symptoms of obstructive jaundice. Usually there is increased fragility of the red cells and an excess of urobilin and urobilinogen in the urine but no bilirubin. Exacerbations are often preceded by typical crises somewhat resembling gallstone colic, with increased temperature, malaise, headache, loss of appetite and an increase of the jaundice. During the crisis the spleen is enlarged and tender. In three of our patients, two under 20 years of age, gallstones were present. Improvement after splenectomy in our cases was a most remarkable phenomenon. The jaundice began to clear within twenty-four hours following the splenectomy and in four days had completely disappeared, with complete restoration of well-being.[14]

There have been attempts, more or less successful, to demonstrate essential differences between the familial hemolytic jaundice of Minkowski[15] and the acquired disease of Hayem[16] and Widal.[9] Chauffard[8] says that in the congenital type the disease shows itself more or less distinctly from birth, and the patients are "more icteric than sick," while the acquired type begins in adolescence and the patient is "more sick than icteric." The congenital type may last for a lifetime with the patient in fair health; the acquired type is progressive and

10. Banti, G.: Arch. d. Scuola d'Anat. patol., 1883, ii, 53; Cited by Lyon, I. P., Diseases of the Spleen, Osler's Modern Medicine, 1908, iv, 759.

11. Giffin, H. Z.: Clinical Notes on Splenectomy, Ann. Surg., 1915, lxii, 166.

12. Giffin, H. Z.: Clinical Notes on Splenectomy, Ann. Surg., 1915, lxii, 166; Clinical Observations Concerning Twenty-Seven Cases of Splenectomy, Am. Jour. Med. Sc., 1913, cxlv, 781.

13. Brill, N. E., and Mandelbaum, F. S.: Large-Cell Splenomegaly (Gaucher's Disease), Am. Jour. Med. Sc., 1913, cxlvi, 863.

14. Those interested in hematogenous jaundice should read the recent contribution by Elliott and Kanavel, Note 1.

15. Minkowski, O.: Ueber eine hereditäre, unter dem Bilde eines chronischen Icterus mit Urobilinurie, Splenomegalie und Nierensiderosis verlaufenden Affection, Verhandl. d. Kong. f. inn. Med., 1900, xviii, 316.

16. Hayem, G.: Sur un variété particulière d'ictère chronique, ictère infectieux chronique spléno mégalique, Presse méd., 1898, i, 121. Nouvelle contribution à l'etude de l'ictère infectieux chronique spléno-mégalique, Bull. et mém. Soc. méd. d. hôp. de Paris, 1908, Series 3, xxv, 122.

leads to death through anemia and its complications.

There is a remarkable similarity between cirrhosis of the liver with enlargement of the spleen and splenomegalia with cirrhosis of the liver. Just so are we impressed by the similarity between acquired hemolytic jaundice and Hanot's cirrhosis of the liver. Both are more common in young adults and are more or less chronic in their course, the patients with hemolytic jaundice frequently living out a life expectancy, and those with Hanot's cirrhosis lasting from four to ten years. Both have enlarged spleens accompanied by jaundice, often slight, but with exacerbations; both may have crises marked by pain in the region of the liver, and in both ascites is usually absent. It is very evident that there is some connection between hemolytic jaundice and Hanot's cirrhosis. That hemolytic jaundice is definitely cured by splenectomy can be stated as a fact and growing experience leads to the conclusion that improvement and sometimes definite cure in Hanot's type of cirrhosis of the liver may be effected by splenectomy, although in confusing types of the disease with hemophilic tendencies one must be guarded in advising surgical treatment.

Pernicious Anemia.—It has been known for many years that pernicious anemia is often accompanied by a large spleen. Eppinger[17] first pointed out that after the spleen was removed, in pernicious anemia an extraordinary improvement in the condition of the blood was usually noted, and experience has borne out Eppinger's observations.

Cabot,[18] in discussing six splenectomies for pernicious anemia, said he had never seen such great improvement produced by any medicinal agent as had followed splenectomy; that no medicament with which he was acquainted would bring up and hold the red cells above four million. Four of his patients had been incapacitated for two years or more and within a few months following splenectomy they were able to go back to work. He points out that sufficient time has not elapsed to show that these patients are cured, but even as a means of producing a prolonged interval of well-being the splenectomies have been worth while.

It is true that the spinal cord changes in pernicious anemia have not been benefited by splenectomy and they have even progressed after splenectomy in spite of the general improvement of the patient. Also the blood in the splenectomized patients so far observed did not entirely lose the characteristic pernicious cells nor could we expect it to do so. We cannot expect the operation to overcome structural changes in organs which have been permanently damaged, and up to the present time the only cases which have been subjected to operation have been largely those in advanced stages of the disease. Experience shows that splenectomy should be resorted to early and in these cases cure may at least be hoped for. The spleen has been removed in twelve of our cases of pernicious anemia (Sept. 20, 1915). The improvement in some of these cases has been remarkable, but not enough time has yet elapsed to warrant any definite statements being made.

In reviewing the basic facts of splenic anemia, hemolytic jaundice and pernicious anemia, the one fact that stands out is that there is a destruction of the red blood cells and that this hemolytic change is accompanied by physical changes in the spleen. It is interesting in this connection that in sixteen of the seventy-one cases of splenectomy in our clinic gallstones were found, and all were in the groups of anemias (forty-seven cases).

In addition to these rather definite groups of cases, enlargement of the spleen is found under conditions for which through lack of knowledge we have no ready classification, as in certain diseases with hemophiliac and purpuric tendencies, and it may eventually be shown that the spleen is associated with these conditions of the blood. Patients with anemia associated with splenomegalia and having high temperature, such as are seen in the pregnant state, require further study. I shall not discuss infections of the spleen, bacterial and protozoal, which give rise to surgical conditions, nor those anomalies and tumors, of which we have observed some remarkable examples. I have purposely omitted reference to the pathology of the spleen itself, because this study is not as yet sufficiently advanced to be more than suggestive. Wilson[19] is now studying our cases and is able to show that there is a true microscopic pathology in these diseases which it is hoped will prove to be characteristic.

Our knowledge of splenic disease, like most of our knowledge of organs in concealed situations, has been the result of study of living pathology under surgical conditions. Postmor-

17. Eppinger, H.: Zur Pathologie der Milzfunction, Berl. klin. Wchnschr., 1913, L, 1509, 1572, 2409.

18. Cabot, R.: Discussion on Blood and Blood Diseases, The Journal A. M. A., June 26, 1915, p. 2164.

19. Wilson, L. B.: Pathology of Spleens Removed for Certain Abnormal Conditions of the Blood, Ann. Surg., 1915, lxii, 158.

tem examinations, which were once looked on as the final word on disease processes, have too often not shown the chronic diseases from which people suffered during life, but only the disease from which they died. Experimentation on animals, like the postmortem, has been of enormous value in laying a foundation for medicine, but as the animals themselves were not diseased, the conditions favorable to exact knowledge were not present, and experimentation is now seen in its proper light as an aid to understanding but not as the final solution of problems of the living. But the living pathology brought forth by the surgeon has in this field, as in others, enabled medical research to produce most valuable material for study and has within the last few years advanced our knowledge of the physiology, pathology and therapeutics of diseased conditions of the spleen more than all else that has been done since the beginning of time.

OUR OBLIGATIONS AS SPECIALISTS *

Walter N. Sharp, M.D.
INDIANAPOLIS

As specialists in medicine we are responsible for the proper diagnosis, treatment and prognosis of disease. Our patients come to us trusting in our ability to cope with their infirmities and advise them as to the outcome or result. They look upon us as specialists in our chosen field — men who should know every feature of their ailments. Are we deserving of the confidence imposed in us unless we are honest with our patients and ourselves? Patients come to us with sick eyes, and it is our duty to find out what that sickness is and if possible its cause, for upon the latter the treatment principally depends. Do we fulfill our obligations by a slipshod examination and diagnosis?

In the case of fundus disease can we conscientiously make a snapshot diagnosis of syphilis without going over the case thoroughly, and finally by a Wassermann test? With a case of squint are we exercising our better judgment when we advise an operation before making a careful examination and extended study of the case, or, as some have carelessly said, "let it alone, it will straighten itself in time"? With a case of cataract are we more anxious for the fee than the good of the patient when we advise extraction before the proper time? Is it for the best interest of the patient when we attempt an intracapsular extraction without having had special training or sufficient experience? Should we even do a simple extraction of senile cataract when we know there is less danger of iris prolapse and fully as good results obtained by the combined method? I recently saw a patient in whom an extraction of a premature cataract was attempted. The result was anything but desirable; iritis followed, lens matter remained, extensive adhesions were present and the vision nil. The case was mistaken for a hypermature cataract.

The loss of the natural eye is an awful thing for the patient; hence we should avoid enucleation when it is not necessary.

If we have a case in which we hesitate as to just what course to pursue, do we call council or do we think we know as much as the other fellow and possibly a little more? I fear that consultations are too infrequent among specialists, and this is probably why some patients become dissatisfied and go from one physician to another or possibly are driven to some irregular or quack. No man is sufficient unto himself alone; we are all dependent more or less upon one another. It is often the case that the unassuming man is more successful from a professional point of view than the best writers and more fluent discussants. Theories count but little; fact is all we have to build upon.

To my mind our annual gatherings should be experience meetings. Cases should be presented as they are, without flowery touches, and our failures as well as our successes should be brought to light and discussed for our mutual benefit. Too many papers are read before societies upon subjects of which the writer knows little or nothing except from reading or hearsay. Papers upon deeply scientific subjects should be presented by men who are well equipped with material for research work. Such papers are usually presented at our national and international society meetings. Indiana, as a state, has not an eye and ear infirmary where large clinical advantages and laboratory facilities may be had—such facilities as are afforded by the larger cities of this country. This may be due to the fact that every village of any size has one or more specialists in this line of work. Indiana should have a state institution centrally located for this special work.

Every member of our society is under obligations to the society to be present at the meetings

* Read before the Indiana State Medical Association, Lafayette, Sept. 24, 1914.

and to have interest in the proceedings. I would suggest that the chairman and secretary be chosen from the same town or city so that they may conveniently get together and cooperate for the good of the society in selecting and constructing a program in sufficient time for publication.

We whose aims and purposes in life are the same should bind ourselves together fraternally for mutual improvement and protection. We have plenty of issues outside our ranks to meet and the principal ones are ignorance and neglect. When we consider the great number of blind in our country alone — blindness which might have been prevented by timely and proper treatment—we will consider our obligations to mankind as great in the field of prevention as that of cure.

We have also the issue of quackery and the many fake glass venders to meet, as they are a source of recognized harm to thousands. Pompous rivalry and vainglorious exhibitions are as much a matter of advertising and quackery as displayed notices. To my mind ophthalmology is one of the best specialties in medicine, and yet it is one of the most abused. The physician with only a few weeks' training is as much a quack as any, for it is utterly impossible for him to meet the varied requirements he poses to meet. At the last meeting of our national society Dr. Frank C. Todd said, "Too many undertake special work after having taken a very short course in some postgraduate medical school, and thus become incompetent and unsafe practitioners." It keeps one on the alert nowadays to keep abreast with modern ophthalmology, even after years of training under competent instructors. It is no mean thing to be able to preserve vision and make the blind see, but it is a great crime to allow a patient to go blind through ignorance.

Encouragement has been given physicians practicing in the country to do refraction work and add to their income, but good work cannot be accomplished by simply buying a trial case; they, as well as ourselves, need special training and much experience before they are able to correct errors of refraction intelligently. It is one thing to have an office full of expensive apparatus and quite another thing to be able to use it to advantage. It may have a good psychological effect upon a patient, but it is wholly unnecessary to meet the requirements for good work. The man who attempts to deceive his patients by such psychological means nowadays is simply making a fool of himself.

There are specialties within specialties and ophthalmology might be classed as two great specialties—that of refraction and that of pathology and surgery; yet they can hardly be separated, for a knowledge of the whole is essential, particularly that of pathology and refraction. Without the former, we would be on the plane with the optician and optometrist. In our study of etiology we must have a general knowledge of the whole field of medicine, as the majority of eye diseases is dependent upon constitutional or remote abnormality. For this reason we often refer our patients back to the physician who referred them to us for further examination or to some specialist in other lines for expert diagnosis; unless we practice our specialty along these lines we are no better than the slipshod physician who gives morphin alone to relieve the pain and tenderness over the McBurney point and waits for results, which often ends in the death of the patient.

In refraction work our obligations to patients do not cease until we have examined the lenses prescribed. It is perfectly right and proper for the physician to furnish lenses to his patient, not for commercial profit, but for the protection of his patient and himself. I find patients are better satisfied with this method than to hand them a prescription and send them to some optician. In former years I did this, but I found in many cases the patient did not return for my examination of the lenses prescribed, and in some instances the optician was unfair in his statements to the patient.

When a patient puts himself in our care he is also under obligations to us, and he is largely responsible for results. He should be made to understand that he must keep his appointments and use the remedies as prescribed. It is the aim and purpose of patients—at least with the majority of them—to get work done for the least possible fee, and often one of the first questions asked by them is, "What do you charge?" We should have a standard fee and be governed in our charges by individual circumstances. Specialists who are blessed with plenty of this world's goods should not, simply for the love of doing the work, cut their fee for refraction or operations to little or nothing; for others, fully as competent, depend upon their professional work for the necessities of life. In most instances we should demand cash for our work, for if we book it, we, like the general practitioner, will be the last to be considered after all other bills are paid. We should learn to combine business methods with our professional practice.

Among ourselves appointments should be as sacred as any other obligation. It costs nothing to be courteous and gentlemanly. A genuine grasp of the hand and a word of encouragement to the fellow at the foot of the ladder is a great help, while a grouchy sideglance or "howdy" becomes more or less contagious.

What I have presented is from observations in the past thirty years of practice, and I trust my colleagues will take them in the same friendly spirit in which they are presented.

712 Hume-Mansur Building.

VESICAL CALCULI IN CHILDREN

WITH REPORT OF A CASE

H. O. MERTZ, M.D.
LAPORTE, IND.

While the literature of stone in the bladder is voluminous and complete, the etiology, the age of the child and the method of removal, with the results attained, we think justify the report of our case.

Florence B., born in May, 1909, was a normal, healthy child in every way until in April, 1912, when three years old, she contracted measles from a sister. She was ill about ten days and at no time was compelled to go to bed. The convalescence was short and recovery was apparently complete, as she played about the house as before. Previous to and during this attack there were no symptoms referable to the urinary organs. Three months following the attack, in July, 1912, when the child was three years and two months old, the mother noticed that occasionally when the urine was voided she sometimes cried a little, but only for a moment, when she was again up and around playing. There was at this time no pain on movement and the mother could not recall that there was any change in the general appearance of the urine, but a frequency of urination was noted. The condition progressed rather rapidly and on Aug. 12, 1912, after being all day at a picnic, the pain was so severe that a physician was called, who prescribed urinary sedatives. The patient grew worse, pain was present with each urination and in October, 1912, there was beginning evidence of pain upon movement. The patient soon learned that by keeping quiet the pain was lessened, so from this time till June, 1914, a period of twenty months, she was sitting or lying down most of the time.

The character of the pain during the early part of the history is indefinite, but from the mother's statements we conclude that prior to the fall of 1913 it was more acute and shorter in duration. In the spring of 1914 the child expressed it as being like a pin prick, but there was also some uneasiness in the bladder all the time. In 1913 she began experiencing some difficulty of urination, it at times being impossible to empty the bladder, at which periods of straining efforts there was some prolapse of the rectum, which always returned spontaneously. Early in the disease she developed an enuresis, and often waked with a cry with each urination.

There was no history of abdominal pain or other symptom that could be attributed to the passage of a renal calculus.

The family history is as follows: Mother, 40 years old and well, has never been under the care of a physician other than during childbirth. Father, 44 years old, has no history of an acute abdominal pain, but has a history of some vague stomach disorder. One sister, 20 years old, is married and well. One brother, 18 years old, is single and well. One sister, 12 years old, had a mastoiditis when 18 months old and measles in 1912. One sister, 9 years old, also had measles in 1912 and scarlet fever in 1914. These two younger sisters are well at present and have no urinary disturbances.

Her paternal grandfather, 84 years old, when 50 years old, passed a renal calculus the size of a pea, which later was voided with the urine. He had had attacks of renal colic for several years preceding. An uncle, her father's brother, 54 years old, passed a renal calculus 22 years ago which was later recovered from the voided urine. A cousin, a woman of 23, had a calculus removed from the right kidney five years ago, and two years ago had the left kidney explored for renal calculus, which was not found. She is still suffering pain referred to the bladder and left kidney. An aunt died of a septic process in the kidney when 30 years old. Another cousin died when 16, after but a few weeks' sickness, which was diagnosed as Bright's disease. The last three are related through the father's family. The mother's family history is negative to any form of lithiasis or grave renal condition.

When I first saw the child, in June, 1914, she was lying down, which position she would maintain throughout the day. Her eyes were red and swollen from crying. Every urination was accompanied with pain, which usually persisted for ten to fifteen minutes after the urine was voided. She was passing urine six to ten times

each night, awaking with a cry at each voiding. Urination was more frequent during the day. She had to be carried about the room as the least motion caused pain. She was poorly nourished, weighing but 33 pounds. Her appetite was poor, her bowels regular. She had had temperature as high as 99.5, and there was no history of chills. While palpation was unsatisfactory, because of fear on the part of the patient, there was slight rigidity over the upper right abdomen and pressure over the bladder produced pain. A specimen of urine voided during the examination was slightly alkaline, contained 200 to 250 pus cells to the ⅛ objective, with 20 to 30 red blood cells to the same field. Albumin was 1.25 per cent. with urea only 0.7 per cent. There were very many triple phosphate crystals, much mucus, but no casts.

Fig. 1.—Florence B. Referred from Dr. Bowell's service June, 1914. Vesical calculus.

A mixed infection was present, colon bacilli and staphylococci being most numerous.

The roentgenogram immediately taken showed a shadow due to a calculus in the bladder (Fig. 1).

Having thus determined our diagnosis, we at once placed the patient upon a treatment tending to encourage elimination, and to acidulate and antisepticize the urine in so far as possible. In the presence of a probable infection of the right kidney and the septic condition of the patient, we considered this preoperative treatment indicated.

On Oct. 13, 1914, a litholapaxy was done, the calculus being crushed and evacuated as thoroughly as possible in one hour and thirty minutes, the arbitrary time limit we had decided as safe for the first crushing. About ten grams of crushed stone was removed at this time. The patient was placed in bed with hot abdominal compresses and left the hospital on the third day. We then again instituted our eliminative and antiseptic treatment, studying the urine closely. She was absolutely free from pain, running about the house at will, until Nov. 20, 1914, when slight pain upon urination was again noticed. This was not constant. This interval between operations was longer than we desired, but a sister contracted scarlet fever necessitating the delay. On Dec. 2, 1914, the remaining fragments were crushed and evacuated. Cystoscopy immediately following the operation demonstrated a very highly congested, inflamed bladder, with particles of calcareous material clinging to the walls. Many of these could not be dislodged with the beak of the cystoscope. The patient left the hospital on Dec. 6, 1914. Irrigations of the bladder were added to the previous treatment. The patient has gained eleven pounds, now weighing, Feb. 1, 1915, 44 pounds. At no time since the second operation has there been any pain on urination. Nocturnal urination persisted for only a few days following the second operation and at no time have we had any incontinence of urine. Cystoscopic examination on Jan. 15, 1915, demonstrated a congested trigone, a normal left ureteral meatus, with a somewhat distorted, hyperemic and edematous right ureteral meatus. No foreign bodies were found in the bladder. On Jan. 22, 1915, a second cystoscopy was performed with the same results, excepting that located upon the left posterior upper quadrant of the bladder there were found several papillary-like bodies seemingly lying just beneath the mucous membrane. These were whiter than the surrounding bladder wall (Fig. 2). A roentgenogram taken Feb. 1, 1915, was negative to calculus of the bladder or kidneys. A third cystoscopy and a second roentgenogram of the kidney and bladder, Feb. 7, 1915, were likewise negative to calculi (Fig. 3). The urine still contains, Feb. 7, 1915, 30 to 50 pus cells to the ⅛ objective. There is no blood. Casts are negative. There is a faint trace of albumin. There are no excess of crystals.[1] From these cystoscopic findings we conclude the pus is coming from an infected right pelvis, possibly some of it being of bladder origin, and that from the cystoscopic and roentgenographic findings that the calculus has been completely removed.

1. On April 1, 1915, a catheterized specimen of urine contained one to five pus cells to the ⅛ objective, with blood negative. There was no albumin. The child weighed 52 pounds, a gain of 19 pounds since the first operation. The cystoscopic findings showed but a slight hyperemia of the right ureteral meatus. The papillary-like bodies were still present.

Vesical calculi have been found in fetal bladders,[2] but the condition seems rare in children under 10 years of age. Kerley[3] has seen but two cases, both in boys aged 5 and 7 respectively. While White and Martin state vesical calculi in children are relatively common, one-

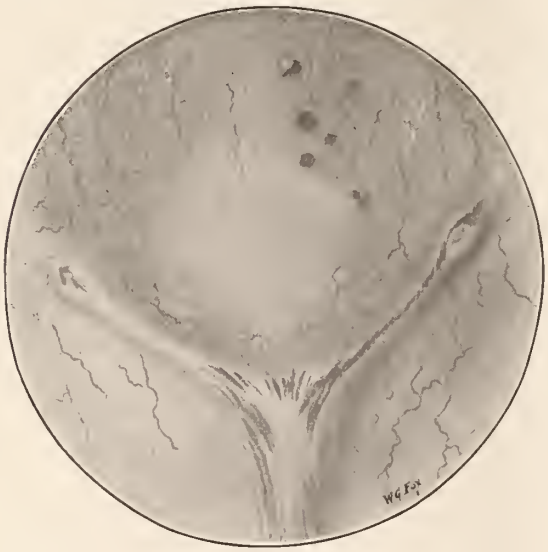

Fig. 2.—Florence B. Cystoscopic findings Jan. 22, 1915.

half of all cases, we are justified in considering the condition rare in girls, as only 5 per cent. of all cases occur in the female.[4]

That individuals in certain families show abnormal tendencies to lithiasis in its various forms is established. Whether this be an inherited phenomenon or the result of a peculiar diet is undecided, but in so far as I could learn there are and have been no unusual features in the diet of our patient's family or their mode of life. We have urinary calculi occurring in four generations of the family, two in males and two in females, with a possible fifth case in a female.

With normal drainage of the bladder a primary vesical calculus is rare, especially in the female, because of the short and distensible urethra. So uniform is this that in every case of stone in the bladder a passed renal calculus or foreign body nucleus must be eliminated.[5] We have no history of any symptoms suggesting a passing renal calculus, and as subsequently shown, there was no foreign body nucleus present.

2. White and Martin: Genito-Urinary and Venereal Diseases.

3. Kerley, C. G.: The Treatment of the Diseases of Children.

4. Von Bergman and Bull: System of Practical Surgery; Benoist, Marcel: Cystinuria and Cystinous Lithiasis, American Journal of Urology, February, 1915. The author reports a case of vesical calculus, the result of the passage of a renal cystin calculus, in a female child 3 years of age.

5. Keyes: Diseases of the Genito-Urinary Organs.

The urinary salts in solution are crystallized by a mucinous body in the urine, which substance, if normal in amount, will result in mature crystal formation; while if in excess, an immature form of the crystal will result, with an abnormal tendency to clumping. Inflammation increases this mucinous body,[6] which degree of increase may depend upon the particular type of infection present.[7] The late Dr. Dunning laid especial emphasis upon an associated eruption of the bladder mucous membrane in a patient suffering with measles. While I can get no history of a cystitis during our patient's attack of measles, subsequent events, we think, warrant our concluding that it did exist and was the exciting factor in the formation of the bladder stone.

The roentgenogram shows the calculus to be single and regular of contour. It was from 1.4 to 1.5 inches in diameter. This was determined by the distance between the jaws of the lithotrite when the calculus was first grasped and by comparative measurements between similar points on the patient's body and on the roentgenogram. The weight of the calculus was estimated at about 18 grams. It was composed of ammonio-magnesium and calcium phosphate

Fig. 3.—Florence B. Roentgenogram taken Feb. 7, 1915. Negative to vesical calculus.

salts, the former predominating. The calculus was soft, as the Roentgen ray seemed to suggest, yet the hardness of a body cannot be accurately estimated by this means.

6. Adami: Principles of Pathology.

7. Wright, A. E.: Vaccine Therapy, Lancet, London, Sept. 17, 1910; Rosenow, E. C.: Observations on Cholelithiasis may prove applicable to urinary lithiasis.

The symptoms of a vesical calculus in a child vary from those in a like condition in the adult only because of the small size of the bladder. Enuresis is a common symptom and when of the character as in our case, the patient awakening with a cry at each urination, is characteristic of the condition. As the stone grows larger pain may continue several minutes after urination. For the same reason (the relatively large size of the stone and small size of the bladder) sudden stopping of the flow of urine during urination is more common in children. The straining thus excited in trying to empty the bladder may produce a prolapse of the rectum with a possible involuntary evacuation of the bowel. Because of the same disproportion in the size of the stone and that of the bladder, hemorrhage is not so common in the child.[8] Our patient had never had hemorrhage sufficient to attract the mother's attention. The pain produced by motion is very characteristic and was present at all times during our patient's illness after the first few months.

The diagnosis was possible from the history and urinary findings of our case when I first saw her. Earlier in the disease, when the symptomatology was less complete, other data might have been necessary. Here the Roentgen ray is the easiest and simplest diagnostic measure attainable, and is usually quite reliable, but when the symptoms justify, though the Roentgen ray be negative, cystoscopy should always be the final method of diagnosis.[9]

In renal or bladder calculi, so long as an infection persists, the stones are prone to reform.[10] While in our case the bladder is free from any calcareous material, because of the infection of the right ureteral pelvis, the probability of recurrence must be remembered, especially with a family history such as our patient has.

Figure 2 shows the appearance of the bladder on Feb. 10, 1915. Diagnosis of a right-sided involvement can be made from meatoscopy,[11] hence we do not consider ureteral catheterization indicated or justified at this time. The papillary prominences are in the upper posterior quadrant of the bladder,[12] which was the principal field of instrumentation during the crushing.

Indications for and against the various operations for removal of vesical calculi must be duly weighed in each individual case. In ours the following led us to choose litholapaxy:

1. The size of the stone (1.5 inches in diameter) was not prohibitive, and we felt justified in considering it of phosphatic composition, hence of but moderate density at most, and the roentgenogram showed a uniformity of density.

2. The child's bladder stands the insults of instrumentation remarkably well. Fig. 2 verifies this.

3. When the bladder capacity equals 75 c.c. litholapaxy can be performed.[13]

4. The dilatability of the female urethra would accommodate a medium-sized instrument without lasting harm. Our patient has had no incontinence.

5. While in severe kidney involvement a suprapubic operation is indicated, the absence of tube casts in the urine of our case assured us that any parenchymatous involvement of the kidney was but slight.

6. Cystitis was severe in our case, but we decided that if the calculus be completely removed, the bladder inflammation could be cured by systematic irrigations. Fig. 2 vindicates this assumption.

7. The immediate mortality following suprapubic operation does not compare favorably with that of litholapaxy. Statistics vary with a suprapubic mortality of from five to twelve times as great.

8. Recurrence seems to be as frequent after cutting operations as litholapaxy.

9. Postoperative irrigations of the bladder are accompanied by less discomfort to the patient when no cutting operation is performed. Our 5½ year old patient never resisted these treatments.

10. Immediate convalescence from the operation is but a matter of a few hours when the crushing operation is performed, while in a suprapubic operation in the presence of infection it is of much longer duration.

11. Litholapaxy is much simpler in a female child, and postoperative impaction of any remaining calculus material more remote, because of the shortness of the urethra.

12. Litholapaxy overcomes the mother's dread of a cutting operation in her child.

13. Should the calculus recur, a second or third removal is not influenced by any previous instrumentation. This fact can be taken advantage of in removing a calculus, as in our case, where but a part of the stone was crushed at the first operation.

8. American Text-Book of Surgery.

9. Beer, Edwin: The Relative Values of the Roentgen Ray and the Cystoscope in the Diagnosis of Vesical Calculi, Jour. Am. Med. Assn., Oct. 11, 1913.

10. Eisendrath, D. N.: Clinical Aspects of Renal Infection, Interstate Med. Jour., July, 1914.

11. Pilcher: Practical Cystoscopy.

12. Lewis and Marks: Cystoscopy and Ureteroscopy.

13. Ransahoff: Keene's Surgery.

14. In litholapaxy instrumental difficulties incident to the crushing may demand an immediate suprapubic interference. At every crushing operation one should be prepared for this complication.

With these facts before us, namely, that the crushing operation is well borne by the child, does no lasting injury to the parts, is quickly recovered from, and has a remarkably low mortality, we considered litholapaxy the operation of choice in our case of primary vesical calculus in a female child 5 years and 5 months old.

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AN INTERESTING KIDNEY CASE

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I want to report this case because of its severity and the successful recovery following. Young man, 30 years of age, had symptoms of stone in the left kidney for two or three years. In July, 1914, nephritic colic followed by fever and series of chills which lasted six weeks, at which time he entered the hospital. He is now very much emaciated, pulse feeble and rapid but is perfectly free from pain. The urine shows albumin, slight amount of blood and pus. The Roentgen-ray picture shows a stone in the left kidney; incision was made in the lumbar region, kidney opened, finding there was a general pyonephrosis and so much destroyed that the saving of the kidney was out of the question, so it was removed with the greater part of the ureter. This boy made an uneventful recovery and was up in three weeks; in the fourth week colic occurred in the right side with chill and fever and complete anuria. The pain ceased after twelve hours and it seemed as though the stone might have passed on into the bladder. A Roentgen-ray picture was made on the second day and no stone was in the kidney nor in the ureter but the plate did not show the entire pelvis. Patient from this time on was perfectly comfortable but became uremic, temperature high and pulse rapid; as death was imminent an operation was attempted to explore the kidney. Palpation through the incision revealed apparently a normal flat kidney there being no hydronephrosis. The incision was extended downward and just about an inch and a half above the bladder a stone was impacted in the ureter. This was removed and sutured with linen. The patient's pulse had been above 150 and temperature 104 with decided uremia when the operation was begun, therefore, a speedy operation was very important. The entire work was done in less than twenty-five minutes.

The interesting feature in this case is that this operation was done on the fourth day after the ureter became blocked and there was not a drop of urine about the kidney or ureter but as soon as the stone was removed, excretion of urine came on.

The patient made a perfect recovery and his health was perfect up until August, 1915, when colic recurred and he passed a urethral stone on the second day. This stone encircled a linen suture which had been placed in the ureter. Since the passing of that stone he appears to be well again and the urine is entirely normal.

This criticism might be made in the management of this case, that in the second attack of colic, the stone in the ureter was thought to have passed on into the bladder, and the Roentgen-ray picture taking the bladder and the lower part of the ureter separately should have been made and in that instance should have shown the stone impacted just above the bladder, which would have given a more thorough indication for the operation which was done, however, the results would not have been any better.

Americans are said to be the greatest meat eaters in the world. The average American feels that he must have meat at least twice a day, and not a few of them are dissatisfied if they do not have some form of meat at every meal. That this excessive meat consumption is injurious to a great many people, and especially those living sedentary lives, is attested by the clinicians who are called upon to treat disturbances in nutrition and metabolism. That a heavy meat diet is not necessary is amply demonstrated by the experience of the Japanese soldiers in the war between Russia and Japan, and is being demonstrated at the present time in the European war where the soldiers have been forced to accept a diet that is almost wholly vegetarian, and the testimony of those who are familiar with conditions seems to indicate that the soldiers are much better off on the vegetable diet than they were when they obtained a liberal supply of animal food. May we not learn a lesson from the experiences of the European soldiers which were brought about by force of necessity?

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EDITORIALS

RELIABILITY OF THE WASSERMANN TEST FOR SYPHILIS

The Wassermann test has become the most widely used of all the serological tests. Every practicing physician—no matter what his line of work may be—meets cases in which the test is indicated. When the Wassermann bears out the clinical diagnosis, all is well and good, but when it does not the test is often branded as untrustworthy and unreliable.

No one will dare venture the assertion that the Wassermann is accurate to the extent of 100 per cent. In spite of that no one will hesitate to admit that it is without doubt our most valuable serological test, and that since it was introduced into clinical medicine our knowledge of syphilis has increased tremendously. Theoretically the Wassermann should be absolutely specific and reliable—that is to say a positive test should spell syphilis, a negative test the absence of syphilis, and a positive test should be obtained only in syphilitic disease. In actual practice, however, it does not seem to work out quite that way. In at least half of the cases of latent syphilis and in many cases of very definite specific infection the reaction remains negative. Occasionally a positive test is obtained in a case that is evidently absolutely free from syphilitic taint. Positive tests, on the other hand, are also obtained in a few non-syphilitic diseases, e. g. malaria, cancer, lupus, leprosy, scarlet fever, trypanosomiasis, etc. The test can not, therefore, be regarded as strictly specific and absolutely reliable. Like all other serum tests the Wassermann may establish or confirm the clinical diagnosis or it may not, and like all other laboratory tests it must be correlated with the clinical findings. The clinician must learn to interpret the Wassermann test just as he interprets any important sign or symptom. When physicians will learn this fundamental idea much—if not all—of the skepticism prevailing at present will be replaced by renewed confidence.

One of the most curious phases of the Wassermann reaction is the fact that different workers often obtain different results with the same blood. Almost every one who has had enough experience knows that, and in recent literature attention has been called to this fact. An attempt is made to explain the differences of the results obtained with the same blood on the basis of differences in technic. It must be remembered that the Wassermann is quite technical and a very complicated procedure. Antigens of various kinds are being used and various modifications of the original technic are in vogue. If every worker were carrying out the original technic with identical reagents under similar and uniform conditions there would be no reason for any discrepancy in the results obtained. Under such conditions the results with the same blood would all correspond. In carrying out such a complex reaction, however, the "personal equation" of each worker sooner or later comes into play, so that either his method or his interpretation of the end result of the reaction may vary from that of another worker.

Laboratory workers have adopted the practice of reporting their results by such symbols as ±, +, ++, and so on. It is to be questioned whether anything is gained by the use of such symbols. In the conception of the average physician the test is either positive or negative. A report on a Wassermann that is worded "positive" or "negative" conveys a meaning that is unmistakable. On the other hand, one containing a symbol such as ± conveys to the average mind no meaning whatsoever. It tends rather to confuse the mind of the general physician who can not be expected to know all details of the reaction. No doubt there are differences in the intensity of the reaction, but are not such differences inevitable in serum work where one is dealing with a biological substance about which there is so little known at present? It is not so important to the patient to know whether he has a "weak" or a "strong" reaction as it is for him to know whether he has a positive or a negative reaction. He may be misled by the former, but he can readily understand the latter. Serologists ought to consider details such as these!

How often one would commit serious blunders if he relied on the blood Wassermann to the exclusion of all other clinical data recently has been emphasized in connection with syphilis

of the central nervous system. In many cases of active neurosyphilis the blood Wassermann repeatedly is negative, yet in those cases the spinal fluid yields a positive Wassermann and shows the other changes characteristic of specific involvement. On the other hand, some cases of active neurosyphilis yield a negative Wassermann with the spinal fluid but a positive test with the blood. In cases of the former type, those with positive spinal fluid findings, specific intraspinal therapy is urgently indicated and ought to be given until the spinal fluid becomes normal, but in cases of the latter type, those with negative spinal fluid findings, intravenous and general anti-luetic treatment rather than intraspinal therapy is indicated. Evidently the relationship between the fluid in the craniospinal cavity and the blood is such a remote one that syphilitic antibodies may be present in one and not the other, and vice versa. Empirical facts such as these have brought about a change in our ideas on the reliability of the Wassermann. The Wassermann test itself often does not tell the patient or his physician the whole story, and in such cases clinical evidence is the best evidence.

PHYSICAL LEPROSY VS. MORAL LEPROSY

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The hearty enthusiasm and splendid activity which has recently swept this country in regard to the establishment of a national leprosarium, impels one who has observed the inert apathy of the medical profession to make an appeal for "safety first" methods for the control of leprosy's first cousin or missing link—syphilis.

Since it is well to provide a national leprosarium for 146 cases of leprosy would it not be just as well to call out "Unclean, Unclean," to the thousands who are staggering under the weight and woe which the ravages and sequelae of syphilis have wrought. The idea of national protection against any form of germ disease is admirable but should this obtain would it not be just as practicable and profitable to inaugurate some form of public education for the masses who have welcomed their lessons in tuberculosis and its management as manifested by their hearty cooperation.

The analogy between leprosy and syphilis is very striking to the trained eye but the casual observer does not discriminate between the amputation of a toe because of leprosy or the absorption of the nasal septum on account of syphilis. However, this very difference is immensely important to the new born baby who may be the product of active syphilitic parents who have burdened the new arrival with a chronic septicemia, scarred mentally and physically. On the contrary, how different is the life for the baby born in a leper colony. Upon showing no signs of the disease, which is no more transmissible in utero than is smallpox, it may be transported to a healthful colony to be reared and in whom the evidences of its parent's disease may never become manifest unlike syphilis which is a congenital septicemia bearing its relentless tyranny on its prey with unmerciful ferocity and leaving its mark with fatal precision.

Health and happiness are assets and physiologic while disease and poverty are liabilities and pathologic. Benjamin Franklin has said, "Public health is public wealth." In order to accomplish this happy end even to the slightest degree, would it not be well to begin to try to check the crafty moral leper who transmits that gaunt, black plague with its legacy of poverty and wretchedness which works its degradation without respite upon the innocent unborn who are irreparably damaged with a preventable yet incurable disease. The medical profession has tolerated and treated this disease in a spirit and manner of criminal negligence for which offense it might be tried for conspiracy or accessory to the crime.

It seems as if the tax payer is already too heavily ladened paying for his brother's keep in the alcoholic wards, the feebleminded institutes, the jails, the prisons, the home for incurables, the poorhouses, the hospitals for the insane, the orphanages, the county hospitals, the reformatories, the deaf, dumb and blind institutes, penal farms, juvenile courts and so on ad infinitum without annexing one more item to the already long list by providing another sanatorium for the care of this ancient and feebly transmissible disease in which religious ignorance and superstition have played such a formidable yet unwarranted part as shown by statistics that New York City had seventeen cases of leprosy last year, fourteen of which were imported, while statistics are dumb concerning the increase of lues which in connection with alcoholism is responsible for this enormous expenditure of funds.

The syphilitic is economically worthless as he or she contracts the disease usually at the onset

of the wage earning period at which time the individual negotiates for a family which is later doomed to either a mental, physical or financial bankruptcy.

The work of education in public health laws might be commenced at the above mentioned institutions where scientific literature on the results of vice might be given to the friends and relatives of patients confined. These institutions, in a short time, would be regarded by the masses as public health bureaus instead of simply custodial institutions for refugees as is the current belief even amongst the more educated classes. The alcoholics committed to the wards of the county hospitals, the jails, reformatories, hospitals for the insane, etc., where patients are confined for indeterminate periods could be utilized for permanent good to the individual and no less benefit to the public treasury by subjecting him or her to the so-called Keeley cure[1] which requires less than a week for its administration and which is also quite inexpensive.

The medical profession is aware of the comparative mildness of measles and mumps, yet how faithfully we comply with the inadequate Board of Health requirements that we report the same immediately while the most contagious disease of all is quite forgotten. Just why this infection should enjoy this immunity, I do not know.

In the southern states and in the islands, one rides in the street cars with the leper; in the streets of Havana, there were so many lepers that Major-General Wood was unable to quarantine all, consequently, they were left to their freedom; in the same streets, we see the little newsboys hopping from one car to another selling their *"La Lucha"* to eager but unenlightened foreigners, although, the boy's toes have been sacrificed to feed the consuming fire of leprosy, yet not so fierce a fire as the unlaudable pus that burns as a prairie fire causing the untold thousands of abortions, stillbirths, blind, epileptic, and idiotic babies as does syphilis and gonorrhea.

The exact etiology of leprosy is unknown, its preventability is still more uncertain and its curability or incurability has baffled the wiseacres from the time that the leper was pronounced ceremonially unclean. On the other hand, the exact cause of syphilis is known, its preventability is very generally known but its curability is absolutely unknown, yet the scourge rages, and no help arrives from the wise government or the intelligent doctors.

1. Towns-Lambert Treatment.

To jail the leper is outrage to civilization; to properly see to his comfort would be a scientific accomplishment in contrast to the heathenish way in which he is stoned from one place to another; but our ignorance of this disease does not warrant the usurpation of their freedom as a makeshift prophylactic and mudguard for lack of medical evidence nor should the fears of the ignorant and prejudiced be satisfied by installing a central hospital where these unfortunates are to be unwillingly transported from home and friends to die of nostalgia instead of their primary lesion. As the county cares for its quarantinable and chronic cases just so could it arrange for any cases of leprosy which might arise. A suitable bungalow might be provided with a yard and a few home comforts together with some appropriate employment which could be disinfected and sold for the partial support of an occasional leper who could at least see his friends from behind the bars for there is no great therapeutic gain to the patient to be had by being placed in a large and imposing hospital.

I have seen fruit venders in the heart of a city visit a leper hospital where the merchant traded with the patients from the vestibule after which he left to ply his trade elsewhere regardless of any possible contagion on the fruit or money while the miserable shutin was left incarcerated behind barred windows as if he had committed some violent criminal act while the moral leper parades at leisure disseminating his spirochetes wherever he chooses yet who would presume to even temporarily quarantine the broken down aristocrat whose disease is regarded more as an elite privilege rather than a public menace.

It may be possible with Pasteur's bequest, that with more sanitation and public health education and a better acquaintanceship with previous medical sphinxes such as Malta fever and malaria that there may be an abandonment or a change for the better in regard to the filthy and unsanitary habits and time worn customs of the natives of countries where leprosy is endemic, yet not unaccountably present when one can see a mother allowing her baby to nurse the goat's mammae regardless of any cleansing whatsoever and no attention paid to the presence of filth nor time of defecation. There are many errors in ordinary housekeeping which would help to ameliorate many infections as well as more cleanly habits to be observed in the churches where every one uses the same communion cup and holy water which

is no more nor less than a common finger bowl, the waters of which are carelessly spilt about a baby's mouth and eyes, these waters which if analyzed would be found to contain many organisms baneful to health.

Should a national leprosarium be necessary for the control of a few cases of leprosy let it be urged that a municipal control be established for the black plague, which Fournier says, "Is the essential murderer of those young in years; it is the veritable tomb of infants; it is the cause of death before birth, within the first week or it may await the first year. Syphilis, alcoholism, and tuberculosis constitute the triad of the contemporaries."

ILL EFFECTS OF OUTDOOR SLEEPING

There is a tendency on the part of many to overwork the theory that sleeping out of doors at all seasons of the year is conducive to the best state of health. There can be no doubt that vitiated air is injurious, and especially so to those who have weakened constitutions and therefore lessened resisting powers. Also there is no question but that if we were accustomed to living out of doors and following our vocation out of doors, like the Indian, we would get along very well; but this idea of sleeping out of doors at night and being exposed to the cold, raw, and penetrating winds while spending our waking hours in overheated and often times illy ventilated rooms, is conducive to the production of certain conditions that are not favorable to the best health and the preservation of all the functions of the body. One should have plenty of fresh air, but it is not necessary to sleep out in the open in all kinds of weather in order to obtain it. The unprotected sleeping porch may be a cause of harm as well as good unless used with a proper degree of caution. The otolaryngologist is beginning to recognize the dangers of open-air sleeping in inclement weather, especially in the winter, through the increase of the number of cases of catarrhal inflammations of the upper respiratory tract, not omitting the production of catarrhal deafness through the habit of some people of sleeping out of doors at night in winter and spending the days in super-heated rooms. For the tuberculous patient who, in order to regain health, spends his entire time out of doors, both day and night, the proposition is entirely different, for here the patient becomes inured to the outdoor air and does not suffer from the ill effects occasioned by the change to the super-heated and illy ventilated rooms indoors. Accordingly it is a question if we should not sound a word of caution concerning the growing tendency on the part of many people to carry this out-door sleeping to extremes.

THE THERAPEUTIC CABINET

As another evidence of the regularity with which doctors bite at every bait that is thrown out it only is necessary to look into the offices of a considerable number of physicians and note the useless junk in the way of office equipment and paraphernalia that is distributed about, and all of which was purchased at exorbitant prices. The cabinet with its thousand and one uses and "marvelous curative value in the treatment of an infinite variety of diseases" is a familiar sight in the office of many a doctor who has listened to the specious plea of the salesman to the effect that the cabinet will increase business and consequently increase income. Fabulous prices are paid for these cabinets, and one agent, selling cabinets ranging in price from two to six hundred dollars, has been known to boast of cleaning up from one hundred to five hundred per cent. profit, depending upon the gullibility of the doctor. Usually these cabinets occupy a conspicuous place in the doctor's consultation room for a few months, and finally finds a place in a back room where dust and time soon get in their work and put the apparatus on the junk pile. In other words, the doctor soon discovers, and the patient usually discovers, that a lot of manipulation and spectacular work is being done that has absolutely no scientific or therapeutic basis. In fact much of this treatment is so tinctured with commercialism as to lead the enterprising agents for cabinets of various types to put forth the plea that "the cabinets are great money makers," and unfortunately there are enough doctors who look to the money consideration first and efficiency and value second.

BENZOL IN LEUKEMIA

In a paper presented before the Indianapolis session of the Association attention was called to the beneficial effect of benzol in the treatment of that usually fatal disease, leukemia. Benzol, as stated by *The Journal A. M. A.*, is a trade name for benzene. The benzol of commerce is impure and variable in composition. "Benzene, Medicinal," is described in New and Non-Offi-

cial Remedies, and Merck has a product on the market complying with this description. The most frequent unpleasant symptoms from the therapeutic administration of benzene are gastric disturbances, which range in all degrees from simple irritation to loss of appetite, vomiting, hiccough, etc. This action on the stomach generally can be prevented by combining the benzene with olive oil and giving it in gelatine capsules during a meal. More or less persistent headache and dizziness and kidney and bladder irritability should be danger signals, and heeded by withdrawal of the drug. It also should be noted that the action of benzene persists for some time after the patient ceases to take it. The blood must be repeatedly counted, and when the white corpuscles are reduced to 20,000 the treatment should be discontinued immediately. The occurrence of anemia, which is occasionally produced, should also be the signal for discontinuance. Some clinicians caution against the administration while the patient is ambulatory. A patient with leukemia under the administration of benzene should certainly be at rest, and perhaps best in a hospital. *The Journal A. M. A.* quotes Boardman and others as to the method of administration and recommends giving the benzene in gelatin capsules, each capsule to contain 0.50 gm. of benzene with an equal amount of olive oil, prepared just before the administration, these capsules to be swallowed during the meal. On the first day four capsules, representing 2 gm. of the benzene, should be given; on the second day, 3 gm. or six capsules; on the third day, 4 gm. or eight capsules; on the fourth day, and to continue at this dose, 5 gm. or ten capsules. This latter dose should not be exceeded, and should be reduced if the symptoms show undesired action. The drug should be stopped, as above stated, as soon as the white corpuscles have become as low as 20,000 per cubic millimeter. Numerous writers declare that this treatment has shown the greatest success in prolonging the fatal termination from leukemia, whether it be of the myelogenous or lymphatic type.

SANITARY INSPECTION OF NORTHERN INDIANA SUMMER RESORTS

The typhoid fever scare at Lake Wawasee, in Northern Indiana, has brought to the attention of the people in a forceful way the necessity for efficient and thorough sanitary inspection and control of our northern lake resorts. It also has emphasized the inefficiency of health officers and their lack of appreciation of all of the requirements of office. We are fond of talking about "locking the barn after the horse is stolen," and health officers are really very officious and free with their advice after we get into trouble, but sometimes the health officers with their superior knowledge, but inactivity, are more at fault than the people who are ignorant and who would do better if properly advised. The Editor of The Journal, who has a summer home at Lake Wawasee, complained to the health officers, including the State Board of Health, that the sanitary conditions at Lake Wawasee were not satisfactory and should receive attention. So far as known, the complaint ended with its beginning. Now that Wawasee has had a typhoid scare and that it is known that the lake, in common with practically all of the lakes in Northern Indiana, needs cleaning up, it is reported that Secretary Hurty will personally supervise a sanitary inspection at Wawasee and issue such recommendations and orders as seem indicated with a view to giving Lake Wawasee a clean bill of health before the season opens providing his recommendations and orders have been carried out. All of which is very good, but we submit that this is a case where the health officers are "locking the barn after the horse is stolen." But aside from all of this, if the Wawasee typhoid incident results in waking up the State Board of Health, and through it the county boards of health, to the importance of giving the Northern Indiana summer resorts attention such as deserved, something will have been accomplished that will redound to the benefit of the people who sometimes suffer from the laxness of the officials appointed to serve them as much as from their own ignorance.

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

Have you noticed our Physicians' Directory and the new classification?

Have you signed any schedule of fees offered by insurance companies? If not, don't do it. Sign no schedule of fees for services rendered to any person if said schedule of fees is in any particular less than the schedule adopted by your county medical society or the scale of fees that prevail in your locality.

Have you paid your county medical society dues? They should be paid before January 1, and you might just as well pay them now as later. Do it while it is fresh in your mind so that there will be no occasion for delinquency on February 1. Remember that your medical defense by the Association ceases when you become delinquent in your dues, and at the same time your subscription to The Journal expires.

Splenectomy for pernicious anemia seems to be due for an extended trial, though the exact value of the operation will not be known for many years, or until after the patients upon whom the operation has been performed have lived a sufficient length of time to demonstrate the efficacy of the treatment. Lee, Vincent, and Robertson, reporting upon cases operated at the Massachusetts General Hospital, say "Splenectomy is not a very serious operation in pernicious anemia, and it offers a definite means of inducing a remission. The remission thus brought about is more marked in the majority of cases than any other known therapeutic procedure."

To the secretaries of the county medical societies and to the secretaries of the district medical societies of Indiana we desire to emphasize the propriety of keeping The Journal posted as to hours and meeting places of their respective societies. On advertising page 4 will be found the County Medical Society Directory. Its accuracy as a Directory depends entirely upon the fidelity with which county secretaries furnish us with additions and corrections. On advertising page 14 will be found the District Medical Society Directory. It is a waste of good and costly space in The Journal to publish this Directory in its present form. Will the secretaries or some members of the district medical societies help us to keep this Directory up to date?

The average patient suffering from cancer presents himself for treatment when his condition is too far advanced to be cured. This is not due to fear of operation but to ignorance as to the nature of the trouble. As long as the patient suffers no pain and little or no inconvenience he feels that there is no urgent need for attention. Until the public recognizes the fact that cancer must be treated in its early stages in order to effect a cure we will continue to have a high cancer mortality. It is not sufficient to emphasize this matter in medical journals, but the subject should receive widespread attention by the lay press. Every county medical society, through its publication committee, should make it a point to secure publication of properly edited cancer articles in the newspapers in their several communities.

Any number of physicians can be found who are willing to testify to the efficacy and therapeutic value of "echinacea." Such testimony is a good deal like the testimony of the old lady who claims that the wearing of an iron ring, made from a nail taken from the shoe worn by a white horse, will cure rheumatism. The Council on Pharmacy and Chemistry of the A. M. A., after careful examination and analysis, declares that echinacea is without therapeutic merit. The popularity of echinacea among some physicians is but another instance where the medical profession has been "taken in" by the specious claims of manufacturers. Also, the report covering the real findings concerning echinacea is another instance showing the inestimable value of the work of the Council which, in reality, is a clearing house where the wheat is separated from the chaff.

We are rather surprised to hear that some of the prominent members of the Indiana State Medical Association are giving their patronage to some of the pharmaceutical houses that have been shown by *The Journal of the A. M. A.* to be guilty of manufacturing and selling some drugs and pharmaceutical specialties that are inert or of exceedingly poor quality. Of course the plea is made that something is saved by patronizing these houses, but cheap drugs are usually expensive in the end, and we fail to understand why any physician who expects results will buy or use anything but the very best. Quality has never been found in cheapness. No matter where supplies come from, they should meet a certain standard of quality, and when a firm offers goods for a less price than charged by such reputable and responsible firms as Parke, Davis & Company, Eli Lilly & Company, Mulford & Company, and several others that might be mentioned, it is a safe bet that there is something wrong with the quality.

We shall hear more of the complement-fixation reaction in tuberculosis as reported so favorably in French literature. Results of complement-fixation experiments in guinea-pigs, rabbits, and human beings, using as antigen a tuberculin prepared from egg-broth cultures of tubercle bacilli, seem to have been very satisfactory. The test was positive in guinea-pigs

after the fourth day of infection, and remained so with fluctuations until shortly before death, when it became negative. In man it has been found that the reaction is uniformly positive in the early stages of tuberculosis, and in the majority of cases in the second stage. The observed partial or negative results in the third stage and regarded a negative reaction in advanced tuberculosis is a sign of approaching death. Patients with a strongly positive Wassermann may give a positive reaction with tuberculous antigen, owing, as supposed, to lipoids derived from the egg constituents of the medium which react with syphilitic serum in a manner similar to tissue-extract antigen. *The Journal A. M. A.* therefore suggests that the complement-fixation reaction can be used with advantage in the diagnosis and prognosis of tuberculosis.

During October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Mallinckrodt Chemical Works: Betanaphthyl Salicylate, M. C. W.

Merck and Co.: Betol; Bismuth Tribromphenate, Merck; Butylchloral Hydrate, Merck; Ethyl Bromide, Merck; Homatropine Hydrochloride, Merck; Sodium Cacodylate, Merck.

H. K. Mulford Co.: Hay Fever Vaccine, Mulford: 4 syringe packages (0.0025 mg., 0.005 mg., 0.01 mg. and 0.02 mg.) and 1 syringe packages (0.02 mg.).

Merck and Co.: The Council has recognized Merck and Co. as selling agent for the products of Knoll and Co. described in New and Nonofficial Remedies. The Council has also recognized Merck and Co. as selling agent for Kelene.

Heyden Chemical Works: Betol: Having been advised by the Heyden Chemical Works that Betol is no longer offered for sale the Council voted that it be omitted from New and Nonofficial Remedies.

The warring European nations are beginning to experience some difficulty in securing a sufficient number of army surgeons to care for the wounded. Notwithstanding the fact that the age limit of army surgeons has been increased, and it is not an uncommon thing to accept surgeons of between fifty and fifty-five years of age, there is a dearth of material. This is due to two causes: First, the loss of a large number of army surgeons as a direct result of the accidents of war; and second, the enormous increase in the number of wounded requiring surgical attention. It is reported that the Red Cross is no longer respected, inasmuch as the Red Cross emblem has been used repeatedly as a disguise to accomplish results in warfare that otherwise would not have been possible. If this be true the work of surgeons and nurses in connection with the Red Cross association has become especially hazardous. If the war continues much longer extermination will have limited still further the supply of surgeons as it also will limit the supply of soldiers; but there will remain a vast army of cripples that will tax the resources of the several countries to care for.

Considering the difference of opinion concerning the value of intra-spinal therapy in the treatment of syphilis, the average physician has some hesitation in employing that form of treatment. The work of Swift and Ellis, and a more recent paper by Swift in *The Journal A. M. A.* of July 17, 1915, is illuminating and worthy of careful consideration. The use of neosalvarsan by intra-spinal injections has in some cases been followed by inconvenient and often dangerous sequelae. Therefore such treatment should be used with the greatest caution. On the other hand it should be remembered that some cases that do not yield to intravenous injections of salvarsan often yield when the intraspinal therapy is instituted. Therefore the treatment in appropriate cases and with proper technic is worthy of use. As Swift says, "not all patients with syphilis of the nervous system require intra-spinal treatment, for many of them respond well to intravenous treatment combined with mercury and iodid properly administered, but in other cases in which these means fail the addition of intra-spinal therapy is believed to be of value." The treatment should not be so rigid that individual indications should be disregarded. All the factors have to be considered to give a consistent and beneficial result.

Tobacco as a factor in the production of deafness has been pointed out by numerous observers, but the fact has not been suitably emphasized in text books. D. H. Walker, in *The Journal A. M. A.* for August 21, 1915, calls attention to tobacco as one of the factors in producing a decrease of hearing, and there are innumerable patients who volunteer testimony as to the deleterious effects of tobacco on the

special senses, and particularly the sense of hearing. A common complaint is the production of tinnitus, or even an increase in existing tinnitus with accompanying slight diminution in the hearing power following the use of tobacco, and especially when the tobacco has been used to excess or the patient has used stronger tobacco than usual. The irritable throat of smokers, including the tobacco cough, is familiar to every throat specialist. The tobacco heart is also well known to the internist. Whether this effect is due directly to the effect of the nicotine and by-products of tobacco upon the nervous system, or is due to the indirect effect of the tobacco is a matter of little moment. The fact remains that tobacco is a factor which produces unfavorable symptoms, and we must recognize the harmful influence in the case of tobacco using and advise our patients accordingly.

Having the meetings of the State Association in a hotel is an excellent idea in most respects, especially as it keeps the members well centered and accessible, but occasionally it offers a chance for undesirables to exploit our members at our expense. The firms who were friendly to the Association paid us for the use of rooms on the eighth floor of the Claypool and thereby helped to enhance the value of the session and incidentally assisted in financing it. However, just around the hall, on the same floor, was a room occupied by the Dynelectron Company, who slipped in without asking the consent of the Association. The hotel elevators were decorated with pamphlets concerning the Dynelectron—"Atomic Force for Physicians' Use. Doctors, take one. Demonstrators at Room 806"—while the last page was covered with testimonials chiefly to the effect that it was a "money-maker." How many of our members sensed the ethics of the situation and treated this "demonstration" accordingly? The Association employed a business manager, Dr. Goethe Link of Indianapolis, and due to his efficiency in this position the following acceptable firms paid for space in which to exhibit: William H. Armstrong Company; Swan-Myers Company; R. B. Kraemer—Mudlavia; McCoy-Howe Company; Kelly Koett X-Ray Company; Pittman-Moore Company; Dugan-Johnson Company; Horlick's Malted Milk; Eli Lilly & Company; W. D. Allison & Company; G. H. Phillips Chemical Company; DeVilbiss Manufacturing Company; Trnax-Green Company; White-Haynes & Company.

The *New Jersey State Medical Journal* in its September number announces that hereafter it will neither accept nor print any advertising that can in any sense be considered objectionable or contrary to the rules followed by those journals which maintain clean advertising pages. This means that no proprietary remedies or pharmaceutical specialties which have not the approval of the Council on Pharmacy and Chemistry of the A. M. A. can be advertised. We congratulate the *New Jersey State Medical Journal* on this change of policy, and we believe that the New Jersey physicians will approve of the stand that has been taken. If medical men everywhere would refuse to subscribe for or accept gratuitously medical journals that prostitute their advertising pages for gain, this whole question of what to accept and what not to accept in the way of advertising would be settled, for the nostrum manufacturers would go out of business or seek the daily newspapers for their announcements. Even the secular press is getting more particular than some of the well-known medical journals concerning the quality of advertising to be accepted, and it is a little humiliating for us to acknowledge that this is the case. Fortunately sentiment is slowly but none the less surely changing, and the changed policy of the *New Jersey State Medical Journal* is but another evidence of this. We are glad to welcome that journal into the now large family of medical journals that do not have to apologize for the character of their advertising.

A word of warning concerning collection agencies may not be out of place. It is reported that a number of agents representing themselves to be connected with various collecting agencies, are endeavoring to interest Indiana physicians in the collection of bad accounts. Some of these collection agencies are irresponsible, and a few of them positively tricky. Also, it is rather strange that some of these agencies make no bid for any business except that coming from physicians, and they frankly state that the reason for this is that physicians are so notoriously bad business men that it is easy for a collecting agency to make money out of their so-called bad accounts which, in most instances, are not bad at all if the physicians took the proper measures to collect them. All of which leads us to suggest that it would be wise for the physician to be a little careful about patronizing any collecting agency without making an exhaustive investigation as

to not only the financial responsibility of the agency but the character of it as well. On the whole the doctor who presents monthly bills to his patients and gives debtors to understand that he expects prompt payment, though ever ready to extend charity or deserved leniency, has little use for a collecting agency; and if he really has any bad accounts he can do better by placing these accounts in the hands of a local collector who can be trusted than in the hands of some concern operating from a distant city. A rule followed by the merchants in settling long-standing accounts by any kind of a discount in order to get the account off the books can well be followed by physicians. It cleans up the books and creates a better feeling all around.

California has had some spectacular legislation of one kind and another, and not a little has hampered the medical men in carrying out their highest ideals. Recently the antivivisectionists introduced a bill in the California Legislature providing for a commission of inquiry into laboratory conditions in the state. As might be expected the bill was of a partisan character, and as a compromise a substitute bill was introduced which passed both houses, but the substitute bill, if enacted into a law, would, as *The Journal A. M. A.* says, give any antivivisectionist who wished to form a humane society with himself as president, the right of unlimited search without warrant—a right not possessed by even the constituted officers of the law, the police, constable, or sheriff. Fortunately California has a Governor of some sense and he refused to sign the bill, and gave as his reason the following:

"The antivivisection law is so positively declared illegal by the attorney general that even were I disposed I could not sign it. I may add that the laws of the state of California for the prevention of cruelty to animals and the punishment of those guilty are plenary. Full authority is given to the humane officer, under the law, to obtain search warrants, enter premises, and gather such evidence as he may suspect exists. With our drastic laws, there can be no excuse for those who insist cruelties are practiced upon animals for permitting these cruelties to continue or those practicing the cruelties to go unpunished."

Concerning some common mistakes in the interpretation of laboratory reports, Dr. F. H. Harms, pathologist of the National Pathological Laboratory, of Chicago, in a recent number of *The Journal of the Missouri State Medical Association,* has the following to say:

There is a tendency to diagnose a nephritis *ipso facto* when the laboratory findings show the presence of albumin, and the severity of the condition is gaged by the percentage of albumin present. The object of this article is to emphasize the errors in these hasty conclusions.

It is necessary at the outset to exclude false or accidental albuminuria due to admixture of the albuminous exudate, blood or lymph through the urinary tract, by examination microscopically of the sediment and also by consideration of the clinical picture. After a false or accidental albuminuria has been excluded, there are still the renal albuminurias without anatomic lesions of the kidneys which must be ruled out. These are classified by Saxe as: (1) functional albuminuria: (*a*) after severe muscular exertion, (*b*) after eating an excess of proteid food, (*c*) following nervous shock and other vasomotor changes, (*d*) during labor, (*e*) in nervous children; (2) essential albuminuria: (*a*) cyclic, (*b*) orthostatic or postural, (*c*) albuminuria minima (Leroche and Talamom) after infections or debilitating diseases; (3) traumatic albuminuria, slight injury to kidney, massage of kidney, movable kidney, injury to brain, apoplexy; (4) hematogenous albuminuria, such as severe anemia, purpura, scurvy, cholemia, diabetes, leukemia, severe wasting diseases and after anesthetics; (5) nervous albuminuria, insanity, mental depression, psychoses, paralysis of certain parts of brain, epilepsy, delirium tremens; (6) albuminuria of renal stasis in conditions of passive congestion; cardial, pulmonary and hepatic diseases in the presence of mechanical pressure (stones, tumors) may occur with casts and usually a few red blood cells; (7) toxic albuminuria, irritants (cantharides, turpentine), poisoning with arsenic, mercury, phosphorus, lead, antimony, alcohol, mineral acids, febrile diseases.

In many of these functional disturbances casts may be found.

Only when these are ruled out and when the urine shows albumin and casts repeatedly and there are clinical symptoms as well, can a positive diagnosis of nephritis be made.

The amount of albumin varies usually with the type of disease. In acute cases it is large in amount, becoming variable as it becomes chronic and small in amount in severe cases of contracted kidney. Exceptionally, however, the amount may be large when there is no kidney lesion at all, as in passive congestion, and on the other hand, albumin may be entirely absent at times in interstitial nephritis.

At present certain persons are going over the state endeavoring to interest physicians in a new form of medical defense proposed by one of the large and well-known indemnity insurance companies. In direct connection with this enterprise the Editor of The Journal has received many inquiries concerning the standing and reliability of the Medical Protective Company of Fort Wayne, and in every instance the inquiry has been coupled with the assertion that

an agent for the company offering the new form of insurance has reported that the Fort Wayne organization is financially unsound or has failed to fulfill its obligations to policy holders.

We have no quarrel with an agent who sells something on its merits, but when he attempts to sell something by intimidating those who hold policies in other companies, and who attempts to build up by tearing down others, we believe that it is time to utter a word of caution. We have absolutely no interest of any kind whatsoever in the Medical Protective Company of Fort Wayne, but we do say that until that company has failed in a single instance to live up to all of its obligations, it is the height of impudence, to say nothing of being unfair business tactics, for any insurance representative to say anything against the character of that company. So far as the financial standing of the company is concerned, the best evidence of its stability is proved by the fact that the company, in order to do business in Indiana, has $100,000 in the hands of the auditor of state, and that amount of money stands as a guarantee that the policy holders in Indiana will be cared for in full accord with all of the provisions of their contract. The company claims a surplus of over $150,000 and the amount has been steadily increasing. If further evidence is required, policy holders or prospective policy holders can obtain full information through the auditor of state, or any one of the local Fort Wayne banks. But aside from all this, we believe that doctors should steer clear of those insurance agents who try to build up by tearing down others. They are a good class of people to avoid, just as the doctor who is always knocking other doctors is a good one for the public to avoid.

With all of the abuse that has been heaped upon poor Rockefeller's head for the good luck he has had in accumulating the greatest fortune ever owned by one individual, it must be admitted that the money that has been accumulated is being put to good purpose, and that Rockefeller is not daunted by any of the criticism directed toward him simply because he happens to have money. The Rockefeller Foundation already has been given over $100,000,000, and no sane person would contend that the Foundation is not doing a wonderful work for the benefit of the people of all nations. The Rockefeller Institute for Medical Research is one of the avenues for the expenditure of the Rockefeller millions, and its work is of inestimable value to not only the public but the medical profession as well. The Institute, according to its charter, "is to conduct, assist, and encourage investigations in the sciences and arts of hygiene, medicine and surgery and allied subjects in the nature and causes of disease and the methods of its prevention and treatment, and to make knowledge relating to these subjects available for the protection of the public." By means of this Institute it will be possible for some of the world's greatest scientists to carry on investigations and make discoveries that would not be possible were these scientists compelled as most of them are, to commercialize at least a part of their time and work in order to make a living. The Rockefeller Institute makes it possible for men like Carroll and other of his kind to devote their lives to a work that is not only of absorbing interest to them but productive of results with the advance of science through the uninterrupted and unhampered manner in which their work can be done.

In several states the osteopath has demanded the right to register under the Harrison Anti-Narcotic Law. According to the teaching of the osteopath, he never uses and does not believe in drugs, and when he secures a license to practice he is not asked to meet the same requirements exacted of the regular physician who prescribes drugs; yet, when he applies for a certificate under the Harrison Anti-Narcotic Law he declares that he is a physician with all the rights and privileges of one. It might be a good idea to permit our osteopathic friends to make affidavit to the effect that he has all the rights and privileges of the physician and is entitled to the federal right to procure and prescribe narcotics, after which we might bring him up for obtaining his medical license under false pretenses.

As a matter of fact, these pseudomedical cults are doing just what we have thought all along that they would do; i. e., securing a short cut to the legal right to practice medicine in any way which pleases them, whether it is by prescribing drugs or rubbing the spine for an imaginary displacement. What is true of the osteopaths is true of the chiropractors, neuropaths, and even the optometrists. They all will do whatever we are doing in drug prescribing if there is anything to be gained by so doing, and they will do it without complying with the rigid requirements that we exact of those who secure licensure to practice regular medicine.

Of course this is a serious menace to the public which most needs protection, and it gives special privileges to the incompetent and the untrained. But the episode is not without its lesson which should be pointed out to legislators.

There is one and only one way to protect the people and to treat the so-called schools of medicine with fairness, and that is to have one educational standard for all practitioners of the healing art. Let them practice medicine as they like, but by all means let us know that every man who is licensed to practice has complied with an educational standard which provides that the licensee shall have had not only sufficient academic education, but is thoroughly versed in all of the practical branches pertaining to the theory and practice of medicine.

We frequently hear physicians complain that it is impossible for them to secure adequate compensation for services rendered. We believe that as a general proposition a physician gets just about what is coming to him, and if he is unable to obtain fees that are in keeping with the fees received by confreres it is a rather safe surmise that he is getting about all he is worth. It has been demonstrated over and over again that patients from communities where they say the fees are low will go to other communities and uncomplainingly pay fees that are higher; and likewise that some physicians have been known to go into a community having a reputation for low fees for medical services and charge and secure fees equal to the charges in any of the surrounding communities where conditions are supposed to be better. It is not a question of personality, but, to use a slang expression, it is a question of "delivering the goods." The public wants and demands service, and the public is beginning to get wise to the fact that some doctors are unable to give good service because of a lack of either ability or energy. The average doctor, when getting a new case, charges a ridiculously small fee for his examination, but as a rule even then he robs the patient for he does not make a thorough examination and he does not give a dependable diagnosis. He fails to appreciate the fact that he owes it to himself as well as to the patient to give every case thorough, competent, and conscientious attention, and that when he does this he not only is justified in charging a respectable fee for his services, but in nine cases out of ten the patient is willing to pay the fee that has been charged. He lowers his self-respect and he lowers the estimate placed upon him by the patient when he does superficial work. If he attempts to charge for poor and inadequate work what others charge for good and complete work he will not hold out long, for patients soon learn the truth. In fact, the public is not to blame for many of the unfavorable conditions under which doctors practice medicine, for the doctors themselves are at fault. When we render real service—the kind that is based upon competency, thoroughness, good judgment, and conscientiousness—there will be little complaint about fees, for we shall be entitled to good fees for such service and the public, except in rare instances, willingly will grant them.

Since the appearance of the October number of The Journal we have received a number of schedules of fees allowed by an equal number of liability insurance companies for services rendered in connection with cases that come under the Workmen's Compensation Act. Not a single one of the schedules permits fees that are anywhere near the fees prevailing in any community in Indiana, and in most instances the fees offered are an insult to reputable physicians. No allowance is made for unusual cases or unusual time or skill required, but the fees are based on cases or visits at so much per, with the attending physician furnishing all dressings, medicines or anything that may be required for the proper conduct of the case. It remains to be seen how many Indiana doctors will "fall" for this scheme to secure something for nothing, and to humiliate the medical profession. Every reputable doctor in Indiana should refuse to have anything to do with any so-called schedule of fees as offered by an insurance company. It is quite sufficient to do the work coming under the Compensation Act for the fees prevailing in the community in which the accident occurs. Furthermore, the employers as well as the employees should have the privilege of selecting competent and reputable physicians to serve them. No competent and reputable physician is going to do work for the fees that have been offered in the schedules that we have seen, and if the insurance companies are going to dictate as to whom accident cases are to be sent, then both employer and employee will suffer. As a matter of fact, there is nothing in the new law which requires either employer or employee to accept any dictatorial terms proposed by an insurance company. No member of the medical profession is going to

take advantage of an insurance company, even if he could do so, but it is up to the medical men of the state to prevent the insurance companies from imposing on them in a most shameful manner. Therefore, kind reader, if you are one of the doctors to whom the insurance companies have presented a schedule of fees for acceptance, decline to be drawn into a bargain that places you beneath the respect of your professional brothers who believe that the practice of medicine is something more than a trade. Your services are worth what you have been accustomed to receiving for them, and it is presumed that your fees are on a par with the fees of your confrères. The acceptance of anything less than what you have been accustomed to receiving is demoralizing, and lowers you in the estimation of your associates who will not be the dupes of avaricious insurance companies.

DEATHS

J. W. Sigler, M.D., died at his home in Clinton County October 16, aged 76 years.

Mrs. Josephine Rine, wife of Dr. E. W. Rine of Winchester, died October 11, aged 49 years.

Andrew J. Smith, M.D., of Indianapolis, died October 15, aged 81 years. Death was due to apoplexy.

Cameron Chamberlin, M.D., formerly of Indianapolis, died October 3 at the Presbyterian Hospital, Chicago, from spinal meningitis, aged 37 years.

Mrs. Viretta E. Murray, widow of the late Dr. A. L. Murray, died recently at the home of her daughter at Eaton.

George W. Daniels, M.D., died at his home in Marion October 15, aged 67 years. He graduated from the Kentucky Medical College, Louisville, in 1877.

Alexander C. Freeman, M.D., of Kokomo, an invalid for many years, was struck by a train and killed November 1. He was 81 years of age.

George F. Chittenden, M.D., oldest physician in Anderson, aged 85 years, died October 31. He was the father of Dr. E. W. Chittenden of Anderson.

Nathaniel D. Cox, M.D., died at his home in Spencer October 27 from acute heart trouble, aged 73 years. He was a charter member of the Owen County Medical Society.

A. J. Maslosky, M.D., of Mariah Hill, formerly coroner of Spencer County, was severely burned when his automobile turned over on him while crossing a bridge, and died from the injuries October 19.

Elzy B. Willan, M.D., of Trafalgar, died October 6, aged 82 years. He graduated from the Indiana Medical College and became associated with his brother in the practice of medicine in 1866.

F. M. Perkins, M.D., of Kendallville, died November 1 at Swan, Ind., a few hours after being injured in an automobile accident. The early life of Dr. Perkins was spent in Kendallville. He graduated from the Indiana University School of Medicine in 1911, and had practiced medicine (specializing in diseases of the eye, ear, nose and throat) in Kendallville for the past three years, where he had been very successful in his work. He was 26 years of age.

David H. Van Nuys, M.D., of Anderson, died October 15, just forty-eight hours following the death of his wife, Catherine Custar Van Nuys, and both were buried in a single grave. Dr. Van Nuys was born Nov. 27, 1834, in Switzerland County, Ind., graduated in medicine from Jefferson Medical College, Philadelphia, in 1855, and began the practice of medicine in Rush County, Ind., immediately after graduation. He later located at Richmond, then Hartford City and Lebanon, and finally at Anderson.

Leonidas Mason, M.D., died at his home in Bluffton October 5, from pneumonia following paralysis. Dr. Mason was born at Carrol, Fairfield County, Ohio, in 1837, removing with his parents to Wells County, Ind., in 1838. He attended the old Liber College, Jay County, Ind., and graduated in medicine from the Ohio Medical College in 1872 and from the Cincinnati College of Medicine and Surgery in 1873. Dr. Mason was a charter member of the Wells County Medical Society, scarcely ever missed a meeting while in active practice, and even after retiring he attended the meetings of the society and participated in all discussions. He was always interested in every movement that was for the benefit of the profession.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

Indianapolis has been chosen for the meeting place of the Mississippi Valley Medical Association in 1916.

Dr. Eugene Mumford, Indianapolis, was married to Miss Carrie Frenzel, Wednesday, October 20. They will reside in Indianapolis.

Dr. John P. Franz, 620½ W. Washington Street was painfully injured by a collision between his automobile and a street car. He will recover.

Dr. Steven Eggert, who has been in charge of the Roentgen-ray work at the City Hospital, has submitted his resignation, to take effect December 15.

Dr. J. William Wright, who is associated with Dr. LaFayette Page, was married recently to Miss Ethel Woodard, daughter of Dr. and Mrs. N. D. Woodard.

The City Board of Health has recently appointed Dr. Ralph Lockery anesthetist and roentgenologist at the City Hospital to fill the place made vacant by the resignation of Dr. Eggart.

Maj. E. E. Ruffner, surgeon, U. S. Army, has officially taken charge as inspector-instructor of the sanitary troops, I. N. G., and has just completed an inspection of the same at Angola, Frankfort, Bloomington and Indianapolis.

Dr. Henry Nolting, graduate of 1914, who served internship at the St. Vincent's Hospital, has affiliated himself with the anesthetic staff of the Protestant Deaconess Hospital. This makes the Protestant Deaconess Hospital staff consist of Drs. C. Cabalzer, A. E. Guedel and Henry Nolting.

A controversy over the interpretation of the contract existing between the University Medical Department and the City Board of Health, drawn for the purpose of defining the duties of both parties in the conduct of a dispensary, has resulted in the cancellation of the contract on the part of the Board of Health, and also the withdrawal of the clinical privileges of the City Hospital hitherto extended to the University. The university will continue to operate the dispensary at the college building and bedside instruction will be confined to the Robert W. Long Hospital.

GENERAL

The Union Hospital at Terre Haute is being remodeled.

Dr. E. R. Baldridge of Rosedale has located at Terre Haute.

Tag Day for St. Joseph Hospital, Mishawaka, netted the hospital $330.

Dr. B. H. Cook of Anderson, who has been quite ill for some time, is improved.

Dr. O. D. Hutto of Kokomo spent five weeks in New York taking postgraduate work.

Dr. Theodore Templin of Gary was married October 2 to Miss Gladys Ohbano of Chicago.

Dr. Thomas Jones of Anderson attended the Clinical Congress of American Surgeons at Boston.

Dr. William B. Graham of Noblesville recently celebrated his eighieth birthday anniversary.

Dr. Leaming F. Pyke of LaFayette was married October 20 to Miss Inez Johnson of LaGrange.

Mrs. Mary J. Harris, widow of the late Dr. Isaac N. Harris of Rushville, died October 24, aged 86 years.

Drs. Samuel and Ella Hollis of Hartford City have returned from an extended trip through the West.

The Union District Medical Association held its ninety-fourth semi-annual meeting at Rushville, October 28.

Dr. Samuel G. Todd, formerly of Mishawaka, died October 13, at his home at Oshkosh, Wis., aged 46 years.

Nine young women graduated October 8 from the LaFayette Home Hospital Training School for Nurses.

The seventeenth annual meeting of the Ohio Valley Medical Association was held at Evansville, November 3 and 4.

Dr. M. H. Young, for the past two years located at Brazil, has returned to Harmony for the practice of medicine.

The seventeenth meeting of the Eleventh District Medical Association was held Thursday, October 21, at Huntington.

Dr. E. W. Poinier of Huntington has been appointed county physician to fill the place of Dr. W. R. Beck, who resigned.

Dr. A. C. Bartholomew of Van Wert, Ohio, formerly of South Bend, was married October 27 to Miss Ruth Inez McConahy of Van Wert.

The Sisters of Mercy Hospital, Gary, entertained the physicians of that city and a few out-of-town physicians at a banquet on October 20.

Drs. William H. Kennedy and Walter C. McFadden of Shelbyville spent the latter part of October in New York City and other Eastern cities visiting cancer clinics.

Dr. H. P. Metcalf of New Salem was seriously injured by being thrown from his automobile, lighting on his head, when he tried to dodge a pig while driving near Rushville.

Dr. Fred R. Clapp of Ligonier left November 1 for New York to take special work in diseases of women and obstetrics, and will locate in South Bend, where he will specialize.

The medical library of the late Dr. Walker Schell of Terre Haute was bequeathed to the Owen County Medical Society, and makes a valuable addition to the library of this society.

Dr. R. D. Blount of Valparaiso and Miss Geraldine McNeice of the same city were married at Chicago October 21, and left immediately for New York and other Eastern points.

Dr. J. N. Hurty, secretary of the State Board of Health, delivered a series of lectures at Marion during the week of October 11, in connection with their observance of "health week."

Daviess County has organized under the State Society for the Prevention of Tuberculosis, with Dr. Maud Arthur of Washington, president, and Dr. A. A. Rang of Washington, secretary.

William H. Monks, a chiropractor of Rushville, Ind., was fined $25 for practicing medicine without a license. He has appealed the case from the circuit court to the state supreme court.

Dr. M. A. Austin of Anderson and Drs. R. B. Wetherill, E. C. Davidson and G. K. Throckmorton of LaFayette are among the physicians who attended the Congress of Surgeons at Boston the week of October 22.

Dr. Herman J. Wylie and wife of Montpelier sailed for Japan on November 6, where Dr. Wylie will take up medical missionary work. They go as Presbyterian missionaries, but will be under the Rockefeller Foundation.

The American Red Cross will not be permitted to send surgeons and nurses to the aid of the Armenian people of the Turkish empire, is the information that comes to the State Department at Washington from the Turkish government.

Beginning with the January, 1916, number, *The Journal of Cutaneous Diseases Including Syphilis,* will be published for the American Dermatological Association by W. M. Leonard of Boston. Each number will contain 80 pages, and as far as possible be of interest and value to the general practitioner as well as to the dermatologist.

Dr. Harvey H. Stork, son of Dr. J. H. Stork of Stendal, has located at Huntingburg for the practice of medicine and surgery. He is a graduate of the University of Louisville, and has served as intern at the City Hospital of Louisville and St. Mary's Hospital at Evansville.

Dr. S. A. Shoemaker of Bluffton left November 2 for an extended trip through the West and South. He will visit the expositions at San Francisco and San Diego, and while gone he expects to visit some of the larger clinics, including the clinic of the University of California.

Dr. J. P. Hetherington of Logansport, Dr. C. W. Mackey of Portland, Dr. Charles Marvel of Richmond, Drs. Budd Van Sweringen and E. J. McOscar of Fort Wayne and Dr. J. D. McCann of Monticello are among the Indiana physicians who attended the convention of the Pennsylvania Railway Surgeons at New York City, October 18 to 20.

Dr. George F. Butler, medical director of Mudlavia, has revived, with the October number, a little magazine known as *How to Live,*

which he published several years ago, but which he had dropped because of pressure of professional work. It is not a medical or health journal, as you might expect from the name and coming from the pen of a doctor, but is devoted to "life, love and laughter."

CORRESPONDENCE

BOARD OF HEALTH RULINGS—A COMPLAINT AND ITS ANSWER

Oxford, Ind., Oct. 14, 1915.

To the Editor:—I don't want to knock, but I received a note from the State Board of Health today that should make every country physician "sit up and take notice," for if he has not already received such a notice he will if he tries to receive any information from the board. The notice is as follows: "In the future we cannot accept specimens unless sent to us in our containers—which are sent by express, collect, or by mail."

If you have a very sick patient you must wait two days to get in your order for a container, then about four days for a reply. In the meantime, what happens? I want to cite you two cases that I was interested in—two cases of spinal meningitis.

Case 1. In council with the attending physician, we suspected spinal meningitis. We secured the serum, made a spinal puncture, withdrew the usual amount of fluid and injected the serum. We divided the fluid. The attending physician sent his specimen to the State Laboratory. Not having a *special container,* he placed it in a T. B. container, but placed a letter in the package explaining the case in full. Four or five days later a slip was received marked "Negative Tubercular." I took the part I had and drove to Mudiavia, 15 miles, and came back the same afternoon with a microscopic diagnosis of "Spinal Meningitis." Inoculation of a pig was done to confirm the microscopic findings, which showed up positive in twenty-four hours.

Case 2. In the second case, the same things were done, except giving the serum, as the case was very doubtful. The State Board did not report on the specimen at all, *because* we did not use a *special container.* The second man died.

Now, if we can't have a good hospital and laboratory in each county, why can't the county health officer have a supply of these special containers on hand so that they can be secured in reasonable time? The time has come when the country physician must provide himself with something of this kind or all the good business will go to the centers. There is no reason why we cannot have these things in the rural district just as well as in the city.

Very truly yours, R. E. Lee, M.D.

Answer

Indiana State Board of Health,
Laboratory of Hygiene,
Division of Bacteriology and Pathology,

Indianapolis, Nov. 2, 1915.

To the Editor:—Enclosed you will find, as near as I am able to determine, the facts concerning the matter contained in Dr. Lee's letter of Oct. 14, 1915, to be published in the November number of The Journal.

Dr. Lee's letter is an answer received by the State Laboratory to a request for information concerning a sputum specimen which he sent to the laboratory Oct. 13, 1915, without any information and in an irregular container.

Case 1. The patient was Emory Poole; the physician was Dr. D. E. Mavity, Fowler, Ind. Specimen was taken April 1, 1914, received at the laboratory April 2, 1914, and reported on the same day. Only tubercle bacilli were reported on, as the specimen was so badly contaminated, and no dependable report could be made with regard to meningococci.

Case 2. The patient was Robert Clute. Physician was Dr. D. E. Mavity, Fowler, Ind. Under the date of Nov. 1, 1915, Dr. Mavity writes us as follows: "No spinal fluid was sent you from the Robert Clute case. As I said in my previous letter, Dr. Lee did not see the Robert Clute case and was not connected with it in any way."

With reference to the difficulty which the doctors have in getting the laboratory outfits in Benton County, under date of Oct. 23, 1915, the county health officer writes us as follows: "In reply to your letter, wish to say that for several years I have kept supplies of typhoid, diphtheria and tuberculosis outfits, and take every opportunity that I have to let the doctors know that they can obtain the outfits from me or directly from the laboratory upon application."

Yours very truly,

Will Shimer, M.D.,
Superintendent, 202 Gallup Block.

THE COLLECTION OF SLOW ACCOUNTS

To the Editor:—Here is a collection letter which may prove interesting and helpful to some of my confreres who have slow-pay patrons.

We all get "stung" once in a while, and it is frequently by the man who is able to pay. Just the other day I went over some accounts and picked out a few, for whom I devised a letter. It read something like this:

"You have had statements from me, but pay no attention to them. Since (date) I have sent you six statements. I do not wish to waste any more stamps on useless statements, and I am going to make you a sporting proposition. Here 'tis: If you will write me, saying you are unable to pay this old account, or that you believe it to be an unfair charge, I will mark the account in my books as "CHARITY." This will save both of us future bother. Do one of two things; if you mean to pay, pay now. If you can't pay, or regard this an overcharge, permit me the easy conscience of having done my bit toward charity."

Well, sir! The first man got to my office and was so angry he couldn't speak. And I was cool! He said he was worth five thousand or more and I should have given the account to an attorney—(sarcastic, this!). I receipted him in full, and shan't ever see him again—for which I'm truly grateful. Up to now the collections on these "slow" accounts are 100% and I'm making "enemies" who will no longer send me their "slow" friends. I regard it as a good letter, and I'm game on the "CHARITY" mark—I'll stand it if they can!

Of course I take a chance on a fist fight, but they trained me well on physical culture where I went to literary school, and you, yourself, know the need of brawn in a medical school.

Fraternally,
A Struggling Doctor.

"A GERM OF DEATH"—A PARODY
("Psalm of Life"—Longfellow)

Tell me now, why countless numbers,
  Germs by millions, live to dream
In cesspools, where in slumbers
  Lurks death, though friends they seem.

Germs are real! Germs are earnest!
  And the grave they'll make our goal;
Germs are dust, with filth returnest
  With a warrant for the soul.

Not enjoyment, but germs of sorrow
  Is our microbed end and way,
Let us act to rid tomorrow
  Of the pitfalls of today.

Germs keep pace, while time is fleeting,
  They are valiant, vile and brave,
Some have drum-sticks and are beating
  Germicidal marches to the grave.

In the cesspool germs drill for battle,
  Bivouac in the filth of life;
They are small, but strong like cattle,
  Yoked together for the strife.

Trust no microbe, howe'er pleasant,
  But spray the foe till he is dead;
Spray, spray in the living present
  Germs within, and germs o'erhead.

Lives of microbes here remind us,
  That they can blight our lives sublime.
And tormenting, kill and bind us,
  And bury in the sands of time.

Sprint up! then, perhaps another,
  Sailing o'er life's germy main,
A forlorn and germ-wrecked brother,
  Spraying, shall take heart again.

Let us then, the germs outdoing,
  With a CLEAN UP, for his fate,
Still with germicides pursuing,
  Learn to CLEAN UP while you wait.

—C. C. Morris, M.D., Rockville, Ind.
Oct. 4, 1915.

SOCIETY PROCEEDINGS

THE EIGHTH INDIANA DISTRICT MEDICAL SOCIETY

The annual meeting of the Eighth Indiana District Medical Society was held in the High Street M. E. Church at Muncie Oct. 21, 1915, and was called to order at 10:15 a. m., by President Fred McK. Ruby, M.D., of Union City. Owing to an ample program and lack of time minutes of preceding meeting were not read.

The president appointed the following nominating committee: E. S. Green, Delaware; W. A. Hollis, Blackford; J. E. Hall, Madison, and J. S. Robison of Randolph, who recommended for president, Charles E. Caylor of Pennville; for vice-president, G. W. Bucklin of Muncie; for secretary-treasurer, H. D. Fair of Muncie; for councilor, G. W. H. Kemper of Muncie, and the time for the next meeting, tentatively selected, the third Thursday in October, 1916.

The secretary was instructed to cast the ballot of the society for these nominees. This was done, sixty-five votes being cast.

Dr. L. F. Schmauss of Alexandria made a motion, which was carried, that the chair appoint a committee to draught a resolution deploring the high cost of drugs and petitioning the proper authorities for relief. The president appointed Drs. Schmauss, Trent and Reynard, who presented the following resolution for the approval of the society.

To the Secretary of State,
Hon. Robert W. Lansing,
Washington, D. C.

Dear Sir:

Whereas, Owing to the present conditions due to the inability to import drugs and chemicals necessary in the treatment of the sick and injured, by reason of which the price has so advanced that in many instances it becomes prohibitive, and in others absolutely impossible to obtain them; and

Whereas, This condition imposes a hardship on physicians and patients, thereby in many instances endangering health and lives of the people, therefore be it

Resolved, That we, the members of the Eighth Indiana District Medical Society, in session assembled, at Muncie, Ind., this 21st day of October, 1915, do exceedingly deplore this condition and pray that you will use your best efforts to speedily relieve the same.

L. F. Schmauss, M.D.,
I. N. Trent, M.D.,
Granville Reynard, M.D.,
Committee.

After much argument, pro and con, the society adopted the resolution and instructed the secretary to forward copies to the several officials named.

Before beginning the scientific part of the program, Dr. I. N. Trent made a motion (which was carried) that visiting physicians be extended the courtesy of the occasion and be invited to participate in the discussion of papers.

The paper of Dr. Charles E. Caylor on the "Diagnosis of Upper Abdominal Conditions," was most favorably received and ably discussed by Drs. Trent, Schmauss, Williams, Mix, Kemper and others.

One of the most reasonable and practical addresses ever made before this society was delivered by Dr. W. A. Hollis, on "Our Responsibility in Nasal Practice." The discussion was opened by Dr. A. E. Bulson whose remarks were of inestimable value to all who presume to treat the nose and throat.

At 12:15 dinner was served by the ladies of the M. E. Church and eighty-eight chairs were occupied by physicians or their mothers, wives, sweethearts or daughters.

At 1:30 the members again assembled in the auditorium and listened to Dr. T. M. Jones who read a most profitable paper on "Bone and Joint Infections Diagnosed as Rheumatism." The leaders in discussion being Drs. Mix and Reynard, to both of whom one may listen with profit.

Dr. C. P. Emerson was a little late in arriving but those who awaited his coming were amply repaid, for his presentation of a "Case of Fungus Growth in the Lungs," was an excellent exposition of conditions that are likely to confuse the most careful diagnostician.

H. D. Fair, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

Hotel Washington—Meeting of Oct. 5, 1915

First meeting of year was called to order by President David Ross. Applications for membership of Drs. J. W. Birchfield, B. J. Larkin, H. J. Levis, J. W. Little and E. M. Amos were given first reading.

Resolutions relative to death of Dr. Cameron Chamberlain were read by Dr. W. D. Hoskins and voted incorporated in the minutes and a copy sent deceased's mother.

Program follows: Dr. C. K. Jones reported five cases: 1. Fracture of surgical neck of humerus, with an undiagnosed dislocation of head of humerus. Patient seen for first time four weeks following injury when the diagnosis was made and confirmed by a stereoscopic Roentgen-ray picture. Reduction at this time was impossible. 2. Fracture of left clavicle with a dislocation of humerus present. Dislocation of left humerus, however, proved to be of long standing, having occurred twelve years previous. Patient had done hard manual labor during this period. No attempt made at reduction. 3. Compound comminuted fracture of left tibia, middle third, and an oblique fracture of middle third of left fibula. Good recovery and patient returned to work eight months from date of injury with no perceptible limp present. 4. A diagnosed supracondylar fracture of right humerus which proved to be backward dislocation of the forearm. Patient treated in neighboring town where Roentgen ray was not accessible for five weeks and then sent here when the diagnosis was made. Reduction could not be procured even under an open operation, resulting in an ankylosis of the elbow. 5. Rupture of the plantar tendons of the foot followed by a disability of eleven months. Roentgen ray and Wassermann examination were both negative. Final diagnosis was chronic bursitis. Good recovery.

Dr. H. K. Bonn reviewed the pathology of mixed tumors of the submaxillary glands and reported a personal case of a mixed tumor (Myxo-Chondro-Adenoma) of the right submaxillary gland. This case occurred in a male 32 years old who had first noticed the tumor nine years ago. Tumor had only lately begun to grow a little more rapidly. Tumor was size of a hen's egg and freely movable and its removal was attended with but little difficulty. Dr. Bonn also showed two specimens of Dr. J. R. Eastman. One specimen consisted of a tuberculous right ovary and tube and a tuberculous appendix removed from the same patient. This patient also presented a peritoneal tuberculosis. The other specimen consisted of a gall-bladder containing twelve stones, which was easily palpable over the area of the appendix.

Dr. L. D. Carter reported a case of cerebrospinal syphilis. Patient was a white man, aged 30. Three months following a chancre on the tonsil, he developed headache, dizziness, incoordination and mild delirium. The neurological signs were those of a cerebrospinal meningitis, with increased reflexes, skin hypersensibility, pupillary changes, muscular rigidity and general tremor. The spinal fluid was under increased pressure, and gave a 4 plus Wassermann, positive globulin and 640 cells per cm. The blood Wassermann was also positive. After an intraspinous injection of bichlorid of mercury, 1/50 grain, in autogenous serum, there was marked serologic and

clinical improvement. After five intraspinous treatments, the spinal fluid became normal and the active clinical symptoms subsided. At the present time, three months later, the patient is apparently well and follows his usual occupation.

This was evidently a case of interstitial syphilitic nervous disease as is evidenced by the high cell count and the rapid improvement in clinical signs. It illustrates the early invasion of the nervous system by the spirochetes, and that medication must be applied directly to the diseased tissues, as this man had received active intravenous and intramuscular medication before the onset of nervous symptoms. In the writer's experience mercurialized serum has proved more satisfactory than salvarsanized serum.

Dr. M. N. Hadley reported two cases of tubal pregnancy. The basic phenomena on which a diagnosis of ruptured tubal pregnancy must be made is the hemorrhage. The variety of sequelae to which the hemorrhage may lead must therefore be kept constantly in mind in making a diagnosis. In the first case the hemorrhage led to the development of a pelvic hematocele. In the diagnosis it was necessary to differentiate between this condition and an inflammatory exudate. Under such circumstances reliance must be placed largely on the clinical history, most important of which is the menstrual history, onset of attack, particularly a close analysis of the pain. Operation revealed a ruptured left tube with development of the hematocele on posterior surface of the right broad ligament. The blood had burrowed beneath the peritoneum from left to right side. The second case was a tubal abortion, and the onset in all respects similar to the first case except the pain was not so intense. No hematocele developed in this case as the tube did not rupture. The hemorrhage occurred within the tube, a small amount finding its way into the peritoneal cavity through the ostium abdominale. In this case there was a true tubal colic present, brought on by the passage of clots through the tube. This colic resembles gallstone or renal colic and is referred to the rectum. Such referred pain when associated with symptoms pointing to pregnancy will materially assist in differentiating tubal from uterine pregnancy.

Dr. Geo. H. McCaskey reported a case of round cell sarcoma in a child, aged 13 years. Patient, O. W., came to my office complaining of tumor situated in region of left groin, which caused him great pain on walking. Gave history as follows: Family history negative. Has had usual diseases of childhood. As to present condition the history was very indefinite owing to the child trying to hide his condition from his parents, but by close questioning was able to ascertain that the condition evidently began to develop following an injury due to his being pitched forward on weathers of a horse. On physical examination I found the mass extended from about the level of Poupart's ligament downward and backward along side of scrotum to about the level of anus. With consent of the parents an exploratory incision was made and a mass of partly broken-down tissue found which, on microscopic examination was found to be small round cell sarcoma.

Dr. T. C. Kennedy reported cases of cancer treated with radium and others treated with autolysin. The treatment of inoperable cancer is a problem. Probably 80 per cent. of the subjects of malignant disease die. Treatment usually is confined to the use of increasing doses of morphin. Autolysin may not give more than temporary relief and careful investigation needs to be made before reliance is placed on its therapeutic effect.

Eight cases of cancer which had been treated with radium were reported. The cases were all of the face or mouth. Radium was applied for varying lengths of time. There were four cures, three cases are improving and are still under treatment, and death resulted in one case of advanced cancer of the mouth. The use of autolysin in nine cases was reported.

Case 1.—Advanced cancer of the throat. Surgeons pronounced the case hopeless. Dr. Kelly used radium without success. Autolysin caused prompt improvement. Pain was relieved and odor was removed.

Case 2.—Physician, cancer of gum. Tumor had been removed. Recurrence followed and radium was used without effect. Autolysin promptly relieved pain. Mass has been reduced in size as well as the glandular involvement.

Case 3.—Advanced cancer of breast. Operation was followed by recurrence. Condition serious. Death in ten days after use of few small doses of autolysin.

Case 4.—Cancer of rectum. Dr. Ochsner believing operation futile had done colostomy. Pain was relieved and definite general improvement resulted from use of autolysin.

Case 5.—Cancer of tongue, Roentgen ray had been used without result. Paste had been applied by a quack. Surgeon considered case inoperable. Radium was then used without results. Autolysin treatment resulted in relief of pain, reduction in size of tumor and marked general improvement.

Case 6.—Cancer of tongue. Case advanced. Radium used without results. Autolysin used as a last resort. Patient died after a few treatments.

Case 7.—Cancer of breast. Inoperable. Extensive glandular involvement. Improvement general under autolysin. Treatment being continued.

Case 8.—Cancer of breast. Radical operation. Recurrence three months previous. Case far advanced. Not much improvement.

Case 9.—Cancer of cervical glands. Microscopic diagnosis from section. Condition advanced. Prompt general improvement. Pain relieved after second treatment to the degree that patient slept eight hours for the first time in three months.

Attendance, 75. Meeting adjourned.

Alfred Henry, Secretary.

Hotel Washington—Meeting of Oct. 12, 1915

Meeting was called to order by the president.

Dr. C. S. Woods was elected to membership, having transferred his membership from Johnson County, Iowa.

The society voted to extend an invitation to Mississippi Valley Medical Society to hold its meeting in Indianapolis in 1916. Dr. A. E. Sterne was appointed to carry the invitation to Lexington, Ky.

Dr. Neff of Kansas City was a visitor.

Program: Dr. Hoskins read a paper on "Some Feeding Problems in Early Infancy."

The superiority of breast feeding over any method of artificial feeding is becoming more generally

recognized. Animal experiments confirm our clinical experience that breast fed infants have greater immunity to infection. Preliminary care of the nipples and breasts, and persistent effort to nurse their babies will enable most mothers to do so. When the breast supply is inadequate, the baby should not be weaned, but given a supplementary food, preferably fresh modified cow's milk. Most of the severe and persistent digestive disturbances in the breast fed infant are due to over-feeding. These can usually be corrected by lengthening the feeding interval or diluting the breast milk. Many of the feeding difficulties attributed to breast milk are due to its misuse. It is within the province of every physician to become an adept in breast feeding. The time, patience and study spent in acquiring this skill is well spent, and the results of this effort both to the physician and the baby are abundantly worth while.

Dr. L. H. Segar reported cases of "Chronic Indigestion from Fat."

Chronic indigestion in infancy is often due to an intolerance of cow's milk fat. This condition is characterized by vomiting and by the appearance in the stool of undigested fat curds, or by unassimilated soaps, which can be demonstrated microscopically. In the large majority of instances careful physical examination fails to reveal any underlying etiology distinct from the digestive tract for the condition. On the other hand occasionally the presence of a probable etiologic chronic infection can be demonstrated. Five such cases occurred in Dr. Lehman Dunning's service at the City Hospital. In three a positive diagnosis of chronic tuberculosis was possible by physical examination, the von Pirquet skin reaction and the Roentgen ray. In one case necropsy proved the diagnosis. There were also two cases in whom a probable diagnosis of tuberculosis was possible. All of these cases showed a marked intolerance for cow's milk fat, none at any time being able to digest and assimilate more than 2 per cent. The tolerance was established for this amount of fat by gradually increasing the fat percentage in the feedings. During the establishment of this tolerance high carbohydrate and proteid feedings were advised. The especial point emphasized was that occasionally chronic tuberculosis is associated with a chronic fat indigestion and should therefore be thought of and sought for in bad feeding cases of this type.

DISCUSSION

Dr. Dunning: Most mothers want to nurse their babies. Bottle babies are of necessity. Cocoa butter best for dry, cracked nipples. Alcohol produces cracking. Many mothers work during day and nurse their babies at night, thus causing breasts to dry up. If wet-nurses were paid they would not be hard to find. Bottle feeding is often unjustly blamed for unsatisfactory results, when the blame should be given some underlying disease. Mothers will not follow a four-hour schedule very long. Better make interval shorter. Relative to tuberculosis our method of making a diagnosis must necessarily differ from that in adults. A von Pirquet reaction in infants under 1 year is almost conclusive. The Roentgen ray is also very valuable.

Dr. Walters: Dr. Hoskin's paper was a plea for breast feeding, which is indisputably the logical one. The overfed baby gives more trouble than the underfed one. The interval should be longer in bottle than in breast feeding. Too frequent feedings give much trouble. No rules apply in sick babies. Each case must be studied. Proteids, carbohydrates and fats, respectively, have been under discussion by the profession during the last several years.

Dr. Torian: Breast feeding is a troublesome problem at times. A crying baby is either hungry or in pain. If hungry and underfed the scales will show us. If overfed the scales will show us. We must pay attention to minor details in managing babies. Underfeeding is no reason for weaning. Weighing babies before and after nursing is often helpful. Feeding the mother has little to do with changing conditions in the baby. Microscoping stools alone may be misleading. Other factors must be taken into account.

Dr. Nevis: Many sick babies see the doctor very late. Poor people do not take ice, and besides, the food is dirty.

Dr. Burckhart: The minor details worked out and followed save many babies. Majority of pituitrin babies show an excess of fat. A gentle use of breast pump may prevent drying up. Use no alcohol on nipples. Buttermilk modified is good food for babies.

Dr. Weaver: We have many cases of fat indigestion without tuberculosis. Clinically evaporated milk does help many cases of fat indigestion.

Dr. Taylor: The mother must have maternal instinct in order to make a success in nursing her baby. We must follow details. It encourages mothers. Three-hour intervals are the best. When a mother is worn out the nursing is incomplete and unsatisfactory.

Dr. Hoskins, in closing, said breast milk carries antibodies which are bactericidal and are a natural factor in combating acute infectious diseases. The paper is intended to stimulate the study of infant feeding.

Dr. Segar, in closing, stated his thought was not that the question of fats was at the bottom of all the cases in pediatrics. My case reports were intended to show that tuberculosis is behind many of these cases.

Meeting adjourned. Attendance, 82.

Alfred Henry, Secretary.

City Hospital—Meeting of October 19, 1915

Meeting was called to order by president. The applications of Drs. C. E. Day, Joel Whitaker, E. A. Willis and Eugene Buehler were read first time. By carried motion the society voted to appropriate $62 to help meet a deficit incurred by the Mississippi Valley Conference on Tuberculosis, which met in Indianapolis, October 28 to November 2.

Dr. Geo. F. Keiper of Lafayette, president of Indiana State Medical Association, was a visitor and addressed the society relative to increasing the membership.

Dr. F. B. Wynn presented several cases of pulmonary tuberculosis in order to compare physical findings with the Roentgen-ray findings. After charting his findings on the blackboard Dr. S. L. Egart would then show the roentgenogram unknown to Dr. Wynn. All cases tallied but one. Dr. Egart said he could not say positively this particular case

was one of tuberculosis. Dr. Wynn thought the physical examination showed so plainly that any good diagnostician would say it was a case of pulmonary tuberculosis. Dr. Wynn expressed the opinion that the Roentgen ray was overrated in these cases, that it counted for about one fourth, while the physical examination counted for about three fourths.

Dr. J. W. Sluss showed three cases.

Case 1.—H. D., aged 14, colored, brought to hospital with supposed dislocation of shoulder. Efforts at reduction failed. A Roentgen-ray picture showed a separation of the epiphysis with the head in place. Exposing the site of fracture the long head of the biceps was found to be interposed between the fragments. The arm was fixed in abduction and slightly forward, in a plaster cast. A subsequent Roentgen ray showed a practically perfect coaptation, the patient quite comfortable. This form of fracture is quite common in children and adolescents, and nearly always mistaken for dislocation and the efforts to reduce which do much damage. The capital points to remember are: (1) The epiphyseal line is just below the tuberosities; (2) action of muscles attached to upper fragment which is beyond control is such as to abduct and draw it slightly forward; (3) the lower fragment, the shaft, must be accommodated to this position and in consequence must be fixed in a corresponding position; (4) best means of fixation is to apply plaster jacket before giving the anesthesia.

Case 2.—C. B., male, aged 35, has had a sore foot for ten years. Began after a severe wrench. In the course of time sinuses have formed. In the meantime three operations have been done without benefit. Ankle joint is not involved though foot is much swollen and there is no atrophy of leg muscles. Pain is not severe and much of the time during the ten years patient has been able to use his foot. It is absolutely essential for the purpose of treatment to make a differential diagnosis between tubercular, luetic and staphylococcic infection, any one of which it may be, there being nothing in case to lead to a definite conclusion: Aid of laboratory must be invoked. Even the laboratory findings may be confusing since tuberculosis and lues may coexist, or either may be found in the bone while the other disease is active in another part of the body. The therapeutic test may be necessary to rule out syphilis. The age of the patient is against tuberculosis, for that form of infection in bone in case of adult is much rarer than is generally believed. The Roentgen-ray findings may be summed up in two words: "hypertrophy" for syphilis, "atrophy" for tuberculosis. The skiagraph in this case shows some overgrowth. Wassermann reaction is positive in spite of healthy children. We lean to that diagnosis in this case. If it is luetic, specific treatment and fixation will cure it. If it is tubercular, fixation and bismuth paste injections will cure it. In either case operation is harmful. If it is staphylococcic, free curettage will be of use, along with vaccine therapy.

Case 3.—Jaundice supposed to be due to gallstones. History develops that attack is duodenal catarrh with tapeworm of twelve years' standing the probable cause.

Meeting adjourned. Attendance, 78.

Alfred Henry, Secretary.

Hotel Washington—Meeting of Oct. 26, 1915

Meeting was called to order by the president.

Dr. L. A. Hyde was elected to membership.

Dr. E. T. Hodges moved that a committee be appointed to wait on Dr. Kitchen, taking to him a word of good cheer, congratulations and felicitations, as well as the kindly will and well wishes of the society. Carried. Drs. E. F. Hodges, F. B. Wynn and J. H. Oliver were appointed on this committee.

PROGRAM

Dr. A. W. Brayton read a paper entitled "Reminiscences," which was thoroughly enjoyed by every one. It dealt with the happenings of the author's life beyond his twenty-first year and brought in many relations with other noted men. The mind of a writer of such a semi-autobiography can rightly be characterized as brilliant, unique, prolific and big. Come again, Dr. Brayton.

Dr. C. R. Strickland read a paper on "Some Systemic Effects of Focal Infection."

The clinical and experimental work of Rosenow, Jackson, Burmeister, Billings, Cabot, Yates, Babcock and others have called our attention strongly to the fact that focal infections may and have often given rise to many systemic diseases which have, until recently, been unrecognized. Vaccine therapy and immunology are established on a firm basis and laboratory methods and their products are available to every physician. All cases require most careful histories and examinations in order that diagnosis may be made, but care must be taken not to ascribe all ills to focal infections, or to use vaccines and serums indiscriminately. It hardly seems possible for a physician to do both the clinical and the laboratory work and have much time for other phases of his practice. The work must, therefore, be divided and the services of a laboratory be sought and their findings and products relied on. Fifty-two cases studied by the writer include iritis, nephritis, subperiostitis, neuritis, aortitis, arthritis, carditis and eight cases with general symptoms. Focal cultures, blood cultures, cultures from the kidney by ureteral catheterization, cultures from synovial membranes and from periarticular lymph glands, and are supplemented, when necessary, by Roentgen-ray findings and surgical measures where needed. In all of these cases, benefits have been noted, but not always cures.

DISCUSSION

Dr. Maxwell: Broke time-honored custom of handing bouquets to essayist. Subject is relatively a new one. Custom has been to remove infected tonsils. Frankle was the first to discover organism causing Hodgkin's disease and said it resembled the tubercle bacillus. Colon bacillus is always found to be in pelvis of kidney. These colon bacilli often cause us to overlook the underlying organisms of Hodgkin's disease.

Dr. Moon: The paper shows the profession is keeping up with the times scientifically. Bacteria find lodgment in respiratory apparatus most easily. Tonsils may catch and hold infections preventing further infection. When the infection becomes systemic, removing the origin will not eliminate it wholly and readily. Newer methods of blood culture are a great boon in diagnosis and subsequent treatment. We

are finding that many diseases are low grade infections. The cause of Hodgkin's disease is not established as yet.

Dr. Tomlin: A tonsil infection often shows a secondary rather than a primary infection. Removal of tonsils will help the body clear up its infection.

Attendance, 85.

Alfred Henry, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of Oct. 8, 1915

The regular meeting of Muncie Academy of Medicine convened in Y. M. C. A. parlor Friday evening, October 8, and was called to order at 8:30 by Dr. B. B. Morrow who acted as chairman during absence of president.

Address for the evening was made by Dr. W. W. Wadsworth who spoke on "The Etiology of Insanity," saying in part: We do not possess sufficient scientific data from which to formulate a definite conclusion as to the transmission of normal or abnormal traits, however, inquiry into ancestral traits may bring to light information regarding the mental and physical strain from which the insane individual sprang, as well as the environment in which he was born and reared. What is born with the individual and what happens to him after birth are of fundamental importance. Regardless alike of fortunes or misfortunes of inheritance, environment will largely determine the individual success or failure in life. Mental exertion beyond the normal capacity is a dissipation, but it is worry rather than work that is responsible for mental derangement. Mental states produce physical inhibitions with reactions on metabolism leading to neuropathic and finally psychopathic manifestations. Emotion is key to both mental and physical action and reaction. Insanity from apoplexy, trauma or arteriosclerosis with hypertension is always secondary. Psychosis accompanied by paresis is almost always specific in its origin. The symptoms of the psychoneuroses have been shown to be the result of pressure of the real world from without in conflict with unconscious impulses, trends or wishes within. Hysterical symptoms are often found in the early stages of various forms of alienation, as mania, dementia praecox and dementia paralytica. Toxemias play an important part in psychoses. We may not qualify insanity by saying "puerperal insanity" or "typhoid insanity" any more than we might say "puerperal pneumonia." The important question is not What kind of a disease has this woman? but What kind of a woman has this disease? Insanity is a complex and not a simple entity and its etiology is due to hereditary, environmental and educational influences.

Adjourned. H. D. Fair, Secretary.

Meeting of Oct. 15, 1915

A quiz on "Insanity" was conducted by Dr. W. J. Molloy.

Dr. D. M. Green read a paper on "The Symptomatology and Diagnosis of Insanity," saying in part: Insanity makes itself manifest in the individual by a change in his usual conduct and conversation, without a corresponding change in the condition of his environment. It may range from oddness or idiosyncrasy to the most violent of manias. It is not a specific entity, but is rather a symptom-complex, subject to an infinite number of variations. That its underlying cause is impaired nutrition or structural changes in the brain itself is manifest in the fact that mental conceptions and psychical reactions are possible of occurrence only through the medium of the brain. Thus in mental affections there is invariably a pathologic condition in some portion of the brain. These morbid changes cover the entire span between macroscopic and the undetectable. Those of the so-called functional maladies are, as a rule, capable of repair; those of the organic-degeneration type are destructions beyond the possibility of repair. The lesser type may merge into the greater.

The symptomatology of insanity may be classified as (a) psychical and (b) physical. Psychical symptoms include evidences of abnormal mental excitement, of delusions, hallucinations and illusions, of confusions, depression and enfeeblement of faculties. Any of these point toward a psychosis. Impairment of volition, marked alterations or disturbances of personality and distinct loss of normal control of the emotions, are among the distinct evidences of mental change. Reductions of normal consciousness constitute a prominent feature of the symptomatology of an advanced insanity. Insomnia is an almost invariable accompaniment. Physical symptoms of insanity embrace congenital physical malformations, such as physical stigmata of degeneracy; disturbance of function of the organs of special senses; as the eye, ear, nerves of touch, etc.; disorders of vital function, as sleep, body weight, temperature, respiration, circulation, blood changes, secretions from glandular organs such as the sweat glands, salivary glands, ductless glands and kidneys, and general nutrition; disturbances of motility, including exaggerated and diminished reflexes, voluntary muscular movements, which give rise to the postures, attitudes, facial expressions and automatic movements which form a characteristic feature of the symptomatology of insanity.

Dr. H. D. Fair spoke for a few minutes on "The Treatment of Insanity," saying: To successfully treat insanity we must first discover what is the matter with our patient, for the value of our service depends on the accuracy of our diagnosis. Why is he at variance with his surroundings, himself or his family? The cause of insanity may be either environmental or physical. The latter may be divided into two groups. (1) The functional or organic which may be amenable to treatment, and (2) those due to changes or degeneration beyond repair. Change of scenery, habits and line of thought will cure the first type. Judicious surgery, corrective treatment will cure the first group of the second type, many of which are of reflex origin. I know nothing about idiopathic insanity but I have seen many satisfactory results due to removal of pathology, and the restoration of normal function. A monomaniac is sane so long as his obsession is removed from him. It is sometimes better to encourage a patient in a harmless whim than to oppose him. Surplus energy must be dissipated in some way.

Drs. Hill, Trent and Wildason took part in the discussion, the latter telling of two instances where the removal of impacted molars was immediately followed by relief from insanity of several years duration.

Adjourned. H. D. Fair, Secretary.

Meeting of Oct. 22, 1915

This being the annual meeting, officers for the ensuing year were elected as follows: president, Dr. O. E. Spurgeon, (reelected); vice-president, Dr. U. G. Poland; 2d vice-president, Dr. I. N. Trent; secretary-treasurer, Dr. H. D. Fair (reelected).

Dr. C. M. Mix made a short address on "Empyema," saying: Empyema is a secondary condition. When following pneumonia it should end in recovery, but as a result of tubercular infection generally proves fatal. Formerly it was thought best to resect a rib in order to properly drain even when little or no attempt was made to break up adhesions and free the lung from the restriction due to a coating of solidified and tenacious exudate which has been hindering proper function. A linear incision in the intercostal space, if of sufficient length and held open by a retractor, will give ample room to enter and perform the decortication necessary in all chronic cases. Of course, the ideal time for operation is before the existence of such pathology. Early diagnosis should be made by the aid of the aspirating needle and evacuation accomplished without waiting for pus formation. Drainage should be instituted while the effusion is serous and is simply separating the lung from the chest wall.

Dr. Mix here exhibited a peculiarly effective dirk pointed trochar, designed by Dr. Rosenthal of Fort Wayne, which provides space for the introduction of the drainage tube through the cannula. The secret of success in chronic empyema is to secure expansion of the lung. The collapsed lung and "caved-in" chest wall reflect no credit to the surgeon, and are happily less frequently seen than they were twenty years ago.

Dr. Mix also spoke very favorably of the Percy cautery and attachments for the treatment of cancer by low degree heat, and recommended the cutting cautery as preferable to the knife in many instances where the latter is indicated. The principal reason being that metastasis is less likely to occur.

H. D. Fair, Secretary.

DELAWARE COUNTY

Meeting of Oct. 1, 1915

Regular meeting of Delaware County Medical Society was held in Muncie Y. M. C. A. Building Friday evening, October 1, and was called to order at 8:15 by President C. Melvin Mix, M.D.

Dr. Harry G. Sloan of the Lakeside Hospital of Cleveland, read a very able paper on "Anoci-Association," saying in part: It should be the object of surgical treatment to restore the patient to a reasonable degree of health and strength soon as possible. Operative technic and after-treatment are the strong factors in securing such results. Of course we should know when to operate, and if the time of election were more closely observed there would be fewer emergency operations. It is safe to say that pain in the abdomen that has existed for three months indicates the need of surgery. Acute conditions such as perforating wounds necessitating operation, demand early service. An important consideration is the anesthesia. Generally speaking, ether increases the pulse rate twelve beats, while nitrous oxid reduces it to the same extent. Morphin is a valuable preliminary adjunct both physical and mental. The psychic element is of no small importance in shock, which is not caused by toxins circulating in the blood. Fear and worry is greatly lessened by morphin. Drowsiness makes the patient less conscious of his surroundings. In our primitive natures fear excites one of two emotions, either to flee or to fight, both of which are disastrous to brain cell structure. Shock per se is due to hemorrhage, or traumatism of the peritoneum. The effect of traumatism is one third less under nitrous oxid anesthesia than under ether. Prolonged painful impulses sent to the brain finally paralyze the brain cells, therefore if we can inhibit such impulse we have removed one of the greatest hindrances to recovery as well as the inherent dread of surgery. This is where Anoci-Association comes into play. The use of novocain solution and quinin and urea hydrochlorid in the deeper structures cuts off direct transmission of painful impulses to the brain. Lighter anesthesia is required which has the additional advantage of prompting the surgeon to use more gentle methods, naturally resulting in less traumatism. In hemorrhage the brain suffers most and every precaution must be taken to conserve the supply. Prolonged partial anemia is just as dangerous as short complete anemia. The brain can do without blood only from three to five minutes but muscular tissue and bony structures can withstand the same depletion for from three to five hours. Elevation of the foot of the bed, for from two to three days if necessary, is indicated in severe loss of blood, and liberal doses of morphin following operation decreases peristalsis and favors early convalescence.

The paper was discussed by Drs. Cowing, Andrews, Trent, Mix and Wadsworth.

Drs. Shields and Turner who were here with a Red Cross First Aid car, made short talks explaining the purpose of their demonstrations which is to instruct all who wish to become more efficient in rendering first aid to the injured, and to prepare in every community a few who will be skilful enough to enlist as members of the U. S. Army hospital corps in case of war.

Adjourned. H. D. Fair, Secretary.

HENDRICKS COUNTY

The Hendricks County Medical Society met in regular session on October 22 at the Public Library, Dr. Rilus Jones of Clayton presiding.

On invitation Dr. William H. Foreman of Indianapolis read a paper, subject: "Some Medical Aspects of Intestinal Stasis." The president, Dr. Jones, read a paper on Floating Kidney; reciting cases in his practice, giving treatment and results. Both the above papers were freely discussed by most members present. The annual election resulted as follows: president, Dr. L. F. Hicks, Amo; vice-president, Dr. T. J. O'Brien, Stilesville, and secretary-treasurer, Dr. W. T. Lawson, Danville.

W. T. Lawson, Secretary.

SPENCER COUNTY

The Spencer County Medical Society met at Rockport, October 20, Dr. J. C. Jolly presiding.

Minutes of last meeting read and approved. Communication from Dr. Will Shimer of Indianapolis was read and arrangements made for him to be with the society on the third Tuesday of November at Rockport.

Dr. E. M. Folsom of Evansville read a paper on "The Laboratory and General Practitioner," and said in part that the reason so many people go to drugless doctors is because the medical profession does not take sufficient time and go into detail with patients. We need laboratories and the people are beginning to realize it.

Dr. W. R. Davidson, district councilor, suggested unity of action and the doing away with personal animosity. Medical defense is a great factor for the benefit of the doctor, so it is highly necessary that the county society be built up. It may not be easy to maintain a laboratory. When suspicious of diphtheria use antitoxin, and do not wait for laboratory examination. The laboratory helps to complete the diagnosis.

Adjourned. H. Q. White, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Mercurialized Serum, Mulford.—A solution of mercuric chloride in normal horse serum diluted with physiologic sodium chloride solution. It is proposed for the treatment of syphilis, particularly the cerebrospinal type. It is supplied as:

Mercurialized Serum, Mulford, No. 1.—One 30 c.c. ampule containing the equivalent of 1.3 mg. (1/50 gr.) mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 2.—One 30 c.c. ampule containing the equivalent of 2.6 mg. (1/25 gr.) of mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 3.—A package of ten 30 c.c. ampules each containing the equivalent of 1.3 mg. (1/50 gr.) of mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 4.—A package of ten 30 c.c. ampules each representing 2.6 mg. (1/25 gr.) mercuric chloride with rubber tube and intraspinal needle.

Mercurialized Serum, Mulford, No. 5.—Eight c.c. mercurialized serum, Mulford, containing the equivalent of 22 mg. (1/3 gr.) of mercuric chloride in a syringe graduated in fourths, with needle.

Mercurialized Serum, Mulford, No. 6.—A package of ten syringes, each containing 8 c.c. liquid which represents 22 mg. (1/3 gr.) of mercuric chloride. H. K. Mulford Company, Philadelphia, Pa. (*Jour. A. M. A.*, Oct. 2, 1915, p. 1185).

Radio-Rem, Outfit No. 4.—An apparatus designed for the production of radio-active drinking water by the action of radium sulphate contained in terra cotta plates. It consists of two plates contained in 250 c.c. bottles; when the bottles are filled with water the two plates impart about 1.8 microcurie (5,000 Mache units) to the water in twenty-four hours. For action, uses and dosage refer to the article on radium in New and Nonofficial Remedies. Schieffelin & Co., New York (*Jour. A. M. A.*, Oct. 9, 1915, p. 1281).

Histamine Hydrochloride.—The hydrochloride of the base beta-iminazolylethylamine (histamine). It is a valuable reagent for the standardization of pituitary preparations.

Imido, Roche.—A name applied to histamine hydrochlorid.

Ampules Imido, Roche.—Each ampule contains 1.1 c.c. of an aqueous 1 in 1,000 solution of Imido, Roche (1 c.c. contains 1 mg.). Hoffmann-LaRoche Chemical Works, New York City (*Jour. A. M. A.*, Oct. 16, 1915, p. 1367).

Betanaphthyl Salicylate.—The salicylic acid ester of betanaphthol. It passes the stomach unchanged, but is split into its constituents in the intestinal tract. It is believed to act as an intestinal antiseptic and to act in a similar way in the bladder. It is said to be useful in intestinal fermentation, catarrh of the bladder, rheumatism, etc. Mallinckrodt Chemical Works, St. Louis, Mo. (*Jour. A. M. A.*, Oct. 30, 1915, p. 1553).

Betol.—A name applied to Betanaphthyl salicylate (which see). Merck & Co., New York (*Jour. A. M. A.*, Oct. 30, 1915, p. 1553).

PROPAGANDA FOR REFORM

Iodum Miller.—The A. M. A. Chemical Laboratory reports that Iodum-Miller was found to be essentially a solution of iodine and potassium iodide in glycerin containing 1.68 per cent. of free iodin. The Council on Pharmacy and Chemistry reports that Iodum-Miller was not eligible for New and Nonofficial Remedies because incorrect statements are made in regard to its composition; because unwarranted therapeutic claims are made for it; and because the application of a trade name to a simple solution of iodin is not to be countenanced (*Jour. A. M. A.*, Oct. 2, 1915, p. 1202.)

Iod-Izd-Oil (Miller's).—Analysis in the A. M. A. Chemical Laboratory indicated Iod-Izd-Oil (Miller's) to be a simple solution of iodin in liquid petrolatum containing, not 2 per cent. of iodin, as claimed, but only 0.42 per cent. The Council on Pharmacy and Chemistry found the preparation ineligible for New and Nonofficial Remedies because the composition is not correctly stated and because the application of a trade name to a simple preparation of this sort is irrational (*Jour. A. M. A.*, Oct. 2, 1915, p. 1202).

Hexa-Co-Sal-In.—Hexa-Co-Sal-In (Hexa-Co-Sal-In Company, Red Bank, N. J.) is advertised as "a condensation product of familiar composition" and that it is "colchi-magnesium salicylate with anhydrous hexamethylenamin." An examination made by the A. M. A. Chemical Laboratory showed that Hexa-Co-Sal-In is a simple mixture of hexamethylenamin, magnesium salicylate and some colchicum preparation. The Council on Pharmacy and Chemistry reports that the statement of the composition of this preparation is false; that unwarranted therapeutic claims are made for it and that the mixture is unscientific (*Jour. A. M. A.*, Oct. 2, 1915, p. 1203).

The Soy Bean.—The soy bean is of medical interest: (1) because it contains the enzyme, urease, which converts urea into ammonia and carbon dioxide and hence is used to estimate urea in urine; and (2) because soy bean products have been recommended as foods for diabetics. Street and Bailey of the Connecticut Agricultural Experiment Station, report that although the soy bean contains about 25 per cent. total carbohydrates, only about 8 per cent. composed of sugar, starch and dextrin, may be considered objectionable in a strict diabetic diet. Thus the sugar-forming carbohydrates contained in soy beans fall well within the limit of 10 per cent. regarded as safe for diabetes (*Jour. A. M. A.*, Oct. 16, 1915, p. 1372).

Somnoform.—This was originally composed of ethyl chloride 60 per cent., methyl chloride 35 per cent. and ethyl bromide 5 per cent. Now it is said to contain but 1 per cent. ethyl bromide. Like ethyl chloride, Somnoform has been used as a substitute for nitrous oxide before ether anesthesia and for short operations, but has been mostly used by dentists for extractions. It is doubtful if the mixture has any advantage over ethyl chloride. The mortality is less than that of chloroform, but twice that of ether and four times that of nitrous oxide (*Jour. A. M. A.*, Oct. 16, 1915, p. 1391).

Some "Patent Medicines" for External Application.—The following statements of composition is indicated by the reports of various state boards of health, the government chemists and the A. M. A. Chemical Laboratory: Amarol, a "complexion beautifier," is composed of Epsom salt 95 per cent. and borax 5 per cent. Anti-Freckle Lotion (Gustin's) contains mercuric chloride 1.5 per cent., alcohol 2 per cent. and water 96.5 per cent. Calocide, for "foot trouble," is sodium chloride 22.44 per cent., borax about 37.58 per cent., alum about 39.35 per cent., tannin small amounts. Cerol, which "cleans and clears the skin," is boric acid, stearic acid and perfume. Clearola, which will "whiten the skin," is sulphur. Cuticle Acid, to "remove dead skin," is alcohol 10 per cent. and oxalic acid 2 per cent. Derma-Royale for skin affections, is a dilute alcohol-glycerin solution with small amounts of camphor, myrrh, benzoin and possibly other aromatics in suspension. Eptol, a wrinkle remover, is essentially borax 37 per cent., soap and stearic acid 63 per cent. Fatoff was found to be essentially soft soap. Gloriol Balm, a vanishing toilet cream, is composed of stearic acid, soap and borax 23.7 per cent., water 76.3 per cent. Gloriol Glowene, said to be a substitute for soap, is soft soap. Zemo, for eczema, pimples, dandruff and similar affections, appeared to be a watery-alcoholic solution containing methyl salicylate, thymol, borax, tannic acid, glycerin, menthol and a phenol-like body (*Jour. A. M. A.*, Oct. 16, 1915, p. 1365-7).

Lactopeptine and Elixir Lactopeptine.—Lactopeptine is sold under the claim that it contains pepsin, diastase, pancreatin, lactic acid and hydrochloric acid. In 1907 the Council on Pharmacy and Chemistry reported that Lactopeptine was practically inert—"essentially a weak saccharated pepsin," devoid of tryptic activity. An examination made by the Council in 1913 confirmed the previous findings. Nearly four months after publication of the last report, the manufacturers protested against the report claiming that Lactopeptine possessed pancreatic activity and contained "loosely combined" hydrochloric acid. The Council now reports that an examination of the market supply demonstrated that a few recently manufactured specimens showed slight (therapeutically negligible) tryptic activity, but that most showed none; the amount of hydrochloric acid was insignificant. Again declaring Lactopeptine and Elixir Lactopeptine ineligible for New and Nonofficial Remedies, the Council points out that, whatever the tryptic activity of the mixture, it is therapeutically useless. Mixtures of pepsin and pancreatin are irrational. The two substances are not indicated in the same conditions nor can they act together. Under physiologic conditions such mixtures are chemically impossible. In a liquid medium the two substances destroy each other (*Jour. A. M. A.*, Oct. 23, 1915, p. 1477).

A Therapeutic Absurdity.—Lactopeptine, whether in the form of an elixir, powder or tablets, is a therapeutic absurdity. Even if fresh specimens of the powder; possessing slight tryptic activity, have any advantage over old ones, there is no way of telling which the patient is likely to get, for the trade packages of Lactopeptine are undated. In liquid preparations like Elixir Lactopeptine, pepsin and pancreatin destroy each other (*Jour. A. M. A.*, Oct. 23, 1915, p. 1466).

The N. F. Imitation of Elixir Lactopeptine.—Nearly forty years ago the essential worthlessness of Lactopeptine was brought to the attention of the pharmaceutical profession. In spite of this knowledge the pharmacists have included imitations of Lactopeptine and Elixir Lactopeptine in the National Formulary under the titles Compound Powder of Pepsin and Compound Digestive Elixir. The *N. A. R. D. Journal*, devoted to the business rather than the professional side of pharmacy, defends the Compound Digestive Elixir on the ground that "physicians keep right on prescribing it." The pharmaceutical profession should consider that pharmacists will in the end lose the confidence of the medical profession and the public by the tolerance of worthless pharmaceuticals (*Jour. A. M. A.*, Oct. 23, 1915, p.1467).

Cardui, the Story of a Nostrum.—*Harper's Weekly* (October 23) traces the growth of the Wine of Cardui business. The author, stated to have been employed by the manufacturers, denies that the nostrum will perform the many wonders claimed for it by the manufacturers, and says that there is one miracle that Cardui can perform — it can make money (*Jour. A. M. A.*, Oct. 23, 1915, p. 1466).

Camphor, Natural and Synthetic.—Though having the same chemical composition, natural camphor is levorotatory while synthetic is optically inactive, it being a mixture of levorotatory and dextrorotatory molecules. Synthetic camphor, used externally and in moderate doses internally, has been reported to have the same effects as natural camphor. The evidence is however unsatisfactory. The natural product being readily obtainable, there is no warrant for the therapeutic use of synthetic camphor until more conclusive evidence is at hand (*Jour. A. M. A.*, Oct. 30, 1915, p. 1555).

BOOK REVIEWS

A Manual of the Practice of Medicine. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania, Lecturer on Medicine in the University of Pennsylvania. Tenth edition, revised. 12mo of 629 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Flexible leather, $2.50 net.

This book represents a careful revision of a work that has attained such popularity as to require ten editions. It is a concise and practical manual of the practice of medicine. It will be found especially useful to the student, though at the same time a ready reference book for the practicing physician. The text has been brought up to date by the addition of the latest knowledge concerning the etiology, pathology, and treatment of diseased conditions. Its size and limp leather binding add to convenience of handling.

A Textbook of Surgery for Students and Practitioners. By George Emerson Brewer, A.M., M.D., Professor of Surgery, College of Physicians and Surgeons, New York; Surgical Director, Presbyterian Hospital; Consulting Surgeon, Roosevelt Hospital, assisted by Adrian V. S. Lambert, M.D., Associate Professor of Surgery, Columbia University; Attending Surgeon, Presbyterian Hospital; and by members of the surgical teaching staff of Columbia University. Third edition, thoroughly revised and rewritten. Octavo, 1027 pages, with 500 engravings and 23 plates in colors and monochrome. Cloth, $5.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

So many changes in the practice of surgery have occurred within the last few years that new books on the subject are always a welcome addition to the library of any practicing physician, and especially so if the books are thoroughly up to date. Brewer's Textbook on Surgery has a well-deserved reputation based on two previous editions, and this third edition sustains the reputation established by being an authoritative presentation of advanced thought and approved practice in surgery. While the subject has been included in one volume of convenient size, yet it is nevertheless complete and rendered especially valuable as a reference book because of its conciseness and the absence of superfluous verbiage. For the student and general practitioner the book can hardly be surpassed, and for the surgeon it will be found to be an excellent reference work. While the entire book has been rewritten to conform to our modern ideas concerning surgery, the chapters dealing with hernia, infections of the hand, cellulitis and bone infection and shock are especially noteworthy. The illustrations, many of which are from photographs, and a few in colors, are especially good and add to the clearness of the text.

A Textbook of Pathology. By Alfred Stengel, M.D., Sc.D., Professor of Medicine, University of Pennsylvania; Physician to the Pennsylvania and University Hospitals, and Herbert Fox, M.D., Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania; Pathologist to the Philadelphia Zoological Garden. Octavo of 1045 pages, with 468 text-illustrations, many in colors, and 15 colored plates. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $6.00 net. Half morocco, $7.50 net.

The new edition of this well-known work on pathology differs materially from its predecessors. It is the work of two authors, Dr. Herbert Fox having contributed largely to this edition. The collaboration of this author yielded a very happy result, for in this volume the subject of pathology is given in such a practical way that it meets the needs of the medical student and the busy clinician. Although a textbook on pathology this book does not ignore clinical considerations where they are helpful in making the subjects clearer or more readily grasped. We are of the opinion that this is the best and most practical way to instruct students and practitioners in this science.

The book has been subjected to extensive revision. Entire sections have been largely recast or almost wholly rewritten, several new sections and many new illustrations have been added. The illustrations are, indeed, unusually good. The authors no doubt realize how valuable they are in treating a subject of this kind.

All in all this new volume is one of the best practical works on pathology we have at the present time.

The Principles and Practice of Obstetrics. By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics at the Northwestern University Medical School; Obstetrician to the Chicago Lying-In Hospital and Dispensary, and to Wesley and Mercy Hospitals; Consulting Obstetrician to Cook County and Provident Hospitals, etc. Second edition, thoroughly revised. Large octavo of 1087 pages, with 938 illustrations, 175 of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $8.00. Half morocco, $9.50 net.

One would hardly have believed that the advance in obstetrics in the two years since the appearance of the first edition of this work has been so great that a new and revised edition was necessary. That this is really so, however, is demonstrated by this new book. Much new material and an abundance of new illustrations have been added. With the increasing general interest in and contributions to our knowledge of such subjects as the Abderhalden test of pregnancy, the so-called "twilight sleep," the treatment of puerperal infection, the use of pituitrin in obstetrics, blood-pressure, and so on, it seems that the book really had to be revised so soon in order to be brought up to date.

It has been a disappointment to find no mention in this volume of the treatment of puerperal infection by intravenous injections of magnesium sulphate. That this is a therapeutic procedure of great practical value has been emphasized by the work of Harrar and has been confirmed in our own experience. Perhaps the author is prejudiced against this method of treatment. Be that as it may, he should at least have mentioned in a work that covers his subject so completely as this a method of treatment that has yielded in puerperal infection therapeutic results that are certainly quite striking to say the least.

This omission cannot, however, detract from the immense practical value of this work. Its popularity with specialists, general physicians, and students, will continue to grow, and the book will continue to hold its place as one of the foremost texts on obstetrics that we have at the present time.

Essentials of Laboratory Diagnosis. Designed for Students and Practitioners. By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine and Assistant to the Professor of Clinical Medicine Medico-Chirurgical College, Philadelphia. Ten full-page plates, four in colors; 48 engravings. Fifth revised edition. Cloth, 450 pages, $3.00 net. Philadelphia: F. A. Davis Company, 1915.

Several excellent books on laboratory diagnosis are before the profession, but none has met with more general favor than this one, the popularity of which is attested by the demand for five editions. It is a concise and compact laboratory manual which deals essentially with laboratory technic, but it contains all the information necessary to provide a working outline for clinical methods for the student or busy practitioner. The criticism that can be offered concerning most books on laboratory methods is that the author has attempted too much and has described too many methods and included too much superfluous data. In the book under consideration the author has avoided all that would make it unnecessarily comprehensive or cumbersome, but has omitted nothing that makes for an every-day, practical handbook of laboratory methods. All methods that have proved reliable are included and much of the material in this fifth edition is entirely new. The plates, four of which are in colors, are excellent, and the text is well illustrated by nearly sixty engravings, most of which have been prepared from original drawings and photographs by the author. The appendix has been arranged to furnish a working basis for the equipment of a clinical laboratory, at the same time affording reference for the preparation of stains, reagents, etc., mentioned in the text.

Diseases of the Nose and Throat. By Algernon Coolidge, M.D., Professor of Laryngology in the Harvard Medical School. 12mo of 360 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $1.50 net.

The best thing we can say about this little book is that it is a safe guide for the student and general practitioner of medicine in his clinical work. The criticism that we would make is that it is not sufficiently comprehensive even though concise. In other words, it takes a good deal for granted, and the student must seek other books of reference for a knowledge of the details which must be known before undertaking some of the work discussed in this volume. Of course, it is well understood that there is such a wide variety of opinions as to what constitutes a proper selection of instruments and there is even a difference of opinion as to technic of operations and the therapeutic measures to be employed in a given case, but to dismiss the subject with the statement that such and such an operation should be performed and give no idea as to how it should be performed, or exactly what therapeutic measures are to be employed, is omitting details of treatment which should be included in even a textbook of modest pretention

However, the general principles which should guide the physician in the adoption as well as the employment of certain forms of treatment are emphasized with unusual clearness and force. The point is also well made that to become successful a physician's training must be with patients, but to acquire good judgment in the interpretation of symptoms and in the question of operation in doubtful cases, the subject must be studied from all sides. Accordingly, space is given to arguments for and against the more common operations and the methods of treatment.

The few illustrations that are included in the book are good, but more might be added with profit. To gain a proper perspective of diseases of the nose and throat and their treatment, this book serves an excellent purpose, but as a working manual it must of necessity be supplemented by more pretentious volumes.

Habits that Handicap. The Menace of Opium, Alcohol and Tobacco, and the Remedy. By Charles B. Towns. Cloth, 290 pages, $1.30 prepaid. New York: The Century Company, 1915.

Few people are unacquainted with the work of Mr. Charles B. Towns in his study and treatment of the victims of habit-forming drugs. He has originated a plan of treatment of these unfortunates which seems to have been wonderfully successful, and is at present employed by physicians and others all over the country. The fact that the plan of treatment has been investigated and has received the endorsement of such well-known physicians as Dr. Richard C. Cabot, and others of equal prominence, is quite sufficient to show that it possesses unquestioned merit. Mr. Towns also has become prominent through his interest in and influence on legislative measures for the suppression and control of the sale of habit-forming drugs, and he is the author of the Boylan bill passed by the New York state legislature in 1914, which is a drastic law regulating the sale of habit-forming drugs in New York state. In his book Mr. Towns gives his experience with drug habitués and some of the facts concerning the manner in which drug users acquire the habit are sensational. Mr. Towns has no hesitation in condemning doctors for their all-too-frequent and unnecessary resort to the prescribing of habit-forming drugs for patients, and he also condemns certain sanitariums which utterly fail to accomplish results in the treatment of these victims of the drug habit. He outlines a cure, the success of which he has himself repeatedly proved and which has the endorsement of reputable men in the medical profession who also have proved its worth. He disclaims any selfish motive in presenting this matter to the public and for the reason that his methods have been made public and he is now devoting the principal part of his time to legislative work from which he does not derive profit. Many of the statements may seem to be extreme or radical, and this is particularly true concerning what Mr. Towns has to say in regard to tobacco and tobacco users, but in the main much good will be accomplished if what has been said concerning the use of habit-forming drugs, including cocain, opium, and alcohol, and the remedy that is offered for the relief, can be placed before the public through the medium of Mr. Towns' book, and much good may be expected from it in the way of intelligent support of protective measures. When all has been said and done, the fact remains that the thing to do is to prohibit the sale of habit-forming drugs except under such restrictions as make it virtually impossible for a habit to be formed through their use.

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ORIGINAL ARTICLES

LOCAL ANESTHESIA IN MAJOR SURGERY*

CHARLES O. BECHTOL, M.D.
MARION, IND.

The earliest attempts at local anesthesia were by application of various agencies, as cold or drugs to the surface of the skin or mucous membrane.

The real beginning was in 1885 when Roberts, after having seen the effect of cocain upon the eye and urethra successfully attempted its use hypodermically. His reports stimulated others to action, and there are several men prominently connected with the development of local anesthesia among whom are Braun, Hackenbruch, Bier, Reclus and Schleich. Halstedt first attempted nerve blocking. Crile advocated cutting to the nerve and making an endoneural injection. The development for several years amounted to attempts at reducing the amount of cocain used and the use of circular instead of line injections. Schleich was one of the most active workers in this field and in 1891 reported over two hundred operations (some of which were abdominal) by this method.

The use of local anesthesia is on its way to popularity now because of the discovery in 1905 of novocain by Einhorn. This drug when combined with adrenalin is non-toxic in amounts necessary for most operations. Reports of various clinics show that a large per cent. of all operations have been done under local anesthesia. At Heidelberg it reached 52 per cent.

The indications for hypodermic anesthesia are as broad as surgery, and every case should be considered favorable for its use unless proved otherwise. Like any other remedy or method of procedure its success depends upon a proper selection of cases. Children that are too young to understand what is going on, or adults who will not understand must be denied this blessing, for it is easy to understand that the effects of fright might be worse than those of a general anesthetic.

Novocain does not produce efficient anesthesia in some fat persons and usually must be supplemented by ether or gas. Acute inflammatory conditions are not so satisfactorily handled, as the needle, unless very fine, and pressure of the infiltration cause some pain, although the anesthetic effect can be made complete. Local anesthesia is not for the operator who is in a hurry, or who has not at least an average delicacy of touch. Rough sponging or retracting can easily be the source of discomfort in an otherwise pleasant operation.

The preparation of patients for operations by local anesthetic does not differ from that which is desirable when ether is employed. The usual cathartic, some hypnotic as trional or veronal to insure a night's rest before the morning of operation, and morphin enough to put the patient in a tranquil state of mind at the time of operation are great aids.

Hyoscin I do not use because of having seen unpleasant effects in a few cases. In small doses excitement rather than quiet is probable. In large doses the effect varies too frequently between unpleasant and fatal. Of the various drugs used for hypodermic anesthesia I am prepared to speak of but three.

Cocain I have used since my beginning in medicine, sometimes satisfactorily, but too often not. It is not a pleasant thing to have a patient experience the toxic effect when even small amounts have been used for some minor operation, and I have not had the courage to use it for any operation of greater extent than a small hernia.

* Read before the Indiana State Medical Association at Lafayette, Sept. 24, 1914.

Quinin and urea hydrochlorid, which was first employed as a local anesthetic by Thibault of Scott, Kansas, has not been generally satisfactory as a substitute for cocain. The effect when used alone is not uniform; the anesthesia not being complete, when used in lesser strengths, and when a higher per cent. is employed, healing has sometimes been slow.

To those of us then to whom local anesthesia has appealed strongly, the advent of novocain and adrenalin marks a great step in advance and a satisfaction in our work not formerly experienced.

The preparation of novocain and adrenalin is simple. For minor operations, or when working in a home, sterile tablets of from ⅓ to 1 grain are employed and are ready as soon as dissolved in sterile water. In hospital practice, for an ordinary hernia or laparotomy, two to three ounces of a ½ per cent. solution, to which is added 6 to 10 drops of adrenalin solution (1 to 1000) is prepared by first boiling the crystals of novocain and later adding adrenalin. A fresh solution is made for each operation.

The maximum dose of novocain is variously given as from 7½ to 22 grains. The instruments necessary are a few good syringes of from 2 to 10 c.c. and a liberal assortment of needles. The syringe which has worked best in my hands is the "record," but it has the disadvantage of a glass barrel and is easily broken. An all metal syringe with a piston which would work smoothly and not leak after being used a few times should be constructed. The needles should slip on the barrel and hold firmly. They should be as thin and sharp as compatible with reasonable strength.

The use of novocain and the degree to which it is depended upon, varies with different men as does their choice and use of general anesthesia. Crile seems to use it as part of a combined anesthetic in which he gives narcotics freely as a preparation and uses gas oxygen to produce unconsciousness. The other extreme is the use of novocain to the exclusion of other means, and in this the Germans have succeeded very well. My own experience is that I can do more and more work by the use of novocain as I have learned to use it in larger amounts. No attempt is made to force the use of novocain to the exclusion of other methods but to make it do its full work and if necessary combine it with ether. The usual procedure is to start every operation under local; injecting the line of incision, fascia and deeper structures as we proceed. In case of laparotomies the peritoneal cavity is opened and an exploration made. Depending upon the extent or depth of the disease present, a general anesthetic will or will not be necessary.

Having proceeded to the actual performance of the operation it is astonishing what a small amount of ether is necessary to carry the patient through. The relaxation is perfect and the ether is withdrawn before closure is started. Usually the patient is talking to the operator by the time the dressings are on.

The choice of general anesthetic when necessary is being debated just now since within the last few weeks Crile in his book on anoci-association says: "Nitrous-oxide-oxygen is the anesthetic of choice as it is odorless; a few inhalations are sufficient to produce unconsciousness; it is less apt to cause nausea than ether, and in a great measure it protects the brain cells from exhaustion." He says further: "It should be emphasized that *the patient is the first consideration* and not the prejudice of the surgeon for a certain method. If nitrous-oxide-oxygen does not fully anesthetize the patient, then in addition, sufficient ether should be given to attain the desired end." Later he says: "It should be borne in mind always that while nitrous-oxide-oxygen is the *safest* of all anesthetics in the hands of an expert in the technique of its administration, it is perhaps the most unsafe in the hands of the inexperienced." He reports 34,960 general anesthesias without a fatality.

The Mayo Clinic reports for 1913 has the following to say concerning ether: "In making a wide survey of the field of surgical achievements, including statistical history, supplemented by the opinions of keen and progressive observers, no other anesthetic or method for application in general is so soundly supported by time and experience as ether administered by an expert with a due allowance of air to the patient." The report says of local anesthesia: "With the scientific advancement of local anesthesia we may hope to see the indications for general anesthesia reduced to a minimum." Nitrous-oxid has not been used in this clinic for ten years.

The technic when operating with local anesthesia alone must be more painstaking than usual. The ability of the patient to feel and speak make a sure guide as to when the injections have been thorough. The knife cut seems to give no pain. Scissor cuts, blunt dissection, heavy handed sponging and sudden pulling may

cause some reflex surprise and it is to guard against these unpleasant sensations that requires more patience and time on the part of the operator than when the patient is asleep. That the results are worth the extra effort, anyone who has experienced them will testify.

During the past two years over 25 per cent. of the author's operations have been done by local anesthesia alone, and during the same period the remainder have had novocain and ether. As we grow in experience the tendency is to do more by novocain alone. Post-operative nausea or gas pains are usually absent when novocain is used alone and very rare by the novocain-ether method.

Nerve blocking as carried on at present, is nearly all intended to be perineural. The injection being made into the region of a nerve trunk and enough novocain is absorbed by the nerve tissue to produce anesthesia in the region supplied by that nerve. The technic of this great branch of local anesthesia is largely a matter of anatomy and has no place in a paper of this extent. Case No. 9 will serve as an illustration.

In the following reports, clinical histories and examinations are purposely omitted. The cases are selected as illustrating the various types.

Case 1.—G. L. Age 20. Right inguinal hernia. Incision-line injections of skin and external oblique, circular injection of neck of sack. Closed by Bassini method. Patient moved himself from table to cart; had breakfast immediately after going to bed, and in half an hour was smoking his usual cigar.

Case 2.—Mr. B. Age 68. Strangulated inguinal hernia. Usual injection technic was employed. The point of interest in this case is that the gut was quite black and under general anesthesia, to save time, one might have been tempted either to take a chance on its recovery or do a resection. Under novocain the ring was opened and the bowel allowed to rest in hot towels until its condition was certain. This required over thirty minutes and during that time the patient was free from pain and told stories to pass the time.

Case 3.—Mrs. E. N. Age 52. Exophthalmic goiter. Incision-line injection of skin. Further injection at random, as pain was felt by patient. Rt. lobe and isthmus removed. Pulse at beginning 115, at close 96.

Case 4.—Mrs. P. Age 29. Exophthalmic goiter. Incision line injection of skin. Muscles and cellular tissue around gland injected. One lobe and isthmus removed. Operation painless. Patient sat up to have bandage applied.

Case 5.—G. C. Age 13. Appendiceal abscess. Novocain. Right rectus incision. Tube drainage. A few drops of ether were given but patient was able to talk to anesthetist entire time. Entire procedure painless.

Case 6.—Miss P. Age 29. Multilocular cyst of left ovary. Abdomen size of six months' pregnancy. Abdomen opened under novocain. Cyst punctured, two gallons of fluid removed. Pedicle injected, clamped and ligated. Muscular rigidity entirely absent. Pain absent. A few drops of ether were given but patient answered questions intelligently throughout operation.

Case 7.—Mrs. C. Age 61. Dilated gall-bladder-stone in cystic duct. Novocain anesthesia. Gall bladder was free from adhesions. Cholecystectomy without pain. Complete relaxation of abdominal muscle. No ether.

Case 8.—Mrs. B. Age 41. Chronic intestinal obstruction. Four years ago patient had some pelvic operation the details of which I could not obtain. An operation was attempted six months ago by another surgeon but he was compelled to quit before having accomplished anything because of the weak condition of the patient. January 12, 1914, in the Grant County Hospital at Marion a third operation was attempted. An ether anesthetic was started; the pulse came up rapidly and by the time the patient was unconscious had reached 160. The anesthetic was withdrawn and the patient returned to her room. Two days later when the pulse had quieted down to 90, another attempt to operate was decided upon. Morphin ¼ was given a half hour before going to the operating room. Pulse at beginning of operation was 120. Usual line injection of novocain was used. Incision without pain. Many adhesions were found between omentum and parietal peritoneum. The pylorus of the stomach was bound down by a firm band of scar tissue. The ascending colon above was constricted by firm bands of omentum. A pericecal membrane was present. A pronounced Lane's kink was present. Exploration showed both kidneys present and normal to touch. Gall bladder contained no stones. No ulcer was evident in stomach or duodenum. During the operation which lasted an hour and a half, a few drops of ether were occasionally given but she talked rationally throughout. Relaxation was perfect. During the operation the pulse fell from 120 to 96.

Case 9.—Mr. O. Age 64. Injury to elbow. Patient's elbow came in contact with a circular saw in such a manner as to nearly amputate the arm. Both small bones were cut off and splintered. A nephritis was reported by his physician who said that formerly he had had an attack of coma. Local anesthesia was decided on and brachial nerve blocking was performed above the clavicle. Twenty c.c. of 2 per cent. novocain were injected and by the time preparations were finished a complete anesthesia of the entire arm was present which lasted throughout more than an hour of tedious repair.

DISCUSSION

DR. CHARLES M. MIX, Muncie: This discussion, so far as I am concerned, will be somewhat onesided, because I must say that in the main I agree with Dr. Bechtol in the cardinal points of his paper and that my experience with local anesthesia has paralleled his to quite a large extent.

Local anesthesia has a wide field of usefulness, and is rapidly becoming applicable to all kinds of surgical procedures. It has, however, one inherent defect—it does not obliterate unconsciousness and thus eliminate fear, which is a potent factor in producing brain exhaustion (shock, if you like). The general anesthetic does produce unconsciousness, but that is about all. It does not break the sensory arc from the periphery to the brain cell. We must conceive of our patient under ether or chloroform narcosis as deprived of his ability to know that he is hurt and the ability to resent the insult, but he is hurt just the same.

That traumatism, either psychic or physical, insomnia, bacterial toxins, excessive muscular action, etc., do produce an exhausted condition of the brain cells, an exhaustion from which all the cells of the brain do not recover, has been abundantly proved by elaborate and long-continued animal experiments. The use of a local anesthesia, either by local infiltration or by nerve-blocking, does prevent these painful and exhausting impressions from reaching the brain.

Nitrous oxid has been shown to do less harm to the patient than ether and chloroform and, as stated by the essayist, to be the most pleasant and the least harmful of the general anesthetics. The action of ether has been proved to be a chemical one—that is, it dissolves the lipoids in nervous tissues, thus producing ether narcosis. Unfortunately, the lipoids are not confined in their distribution to nervous tissue, but are found in the liver and especially the leukocytes. Chemically, we see its effect in the hepatic toxemia occasionally following ether, but more often prolonged chloroform anesthesia, and the sharp rise of pulse and temperature that so often follows operations in acute infections should be interpreted as due to the temporary lowering of the defensive powers of the patient by putting the leukocytes to sleep. We are just beginning to appreciate the dangers of ether.

The contrast between a patient under ether, with full pulse, flushed face, perspiration, higher blood pressure and deeper breathing, with a patient under gas-oxygen plus novocain, or novocain alone, where these phenomena are absent, has only to be seen to be appreciated. This stage of stimulation, caused by ether and the trauma of the operation, has to be paid for, as it is followed always by postoperative exhaustion of a degree commensurate with the amount of trauma produced by the operation and the amount of ether used.

In the past two years, the Mix Hospital has constantly used novocain, as well as urea and quinin, and our impression is that the local anesthesia is the most important single factor in the improvement of results, lowering of mortality almost eliminating morbidity.

Our aim should be not to exploit any method over others, but to play up the patient against his disease by any and all means available. The chief aim of any surgeon is to come as near to the ideal as possible, and that ideal is to do the necessary operation without hurting the patient. How near to that ideal the surgeon can come will depend upon how well he plays this part in the world-old fight of the patient on the one hand and the disease on the other; at least, he wants to be assured that in entering this fight he is not getting in on the wrong side and turning the scale in the wrong direction. Success in the future and the possibility of improving results depend on more control by the operator of the purely mechanical part of his work, more keen knife dissection, keeping on the bloodless planes, less hurry, less scissors, less clamps, less tearing of tissues, less traction on vicera, more accuracy, more gentleness. In grasping this newer fundamental principle, the surgeon must not lose sight of the fact that perfect asepsis and the prevention of the loss of every drop of blood are absolutely essential. The greatest care in the preparation of the novocain solution is imperative. It must be absolutely sterile. It has been a feeling of insecurity in the use of adrenalin (which is destroyed by boiling) that has led me to use straight novocain. Novocain is boiled at our place twice, on the day before and on the morning of the operation. I am fully aware that the majority of surgeons are getting such good results by the use of ether that they are loath to take up something new, that to a degree complicates the operation and prolongs it to a certain extent. To these, I should like to suggest as a beginning the free use of the urea and quinin solution in 1-600 dilution in the peritoneum, subperitoneal tissue and the muscles overlying it, for the purpose of relaxation of the abdominal muscles, as well worth trying. This preparation gives such a beautiful relaxation of the abdominal muscles that I think it is really surprising. I think it proves beyond a shadow of a doubt that we do block off these reflexes that are disturbing the patient and hardening the abdominal wall, and we save enough time in closure, especially on a long rectus incision, which has been properly anesthetized locally, to make up the time that it takes for the injection. Just one more remark—I find by personal experience that I have used thirty-three grains of novocain

in one case without any serious effects; the patient had a lowered blood pressure, but made a very fine recovery.

I would like to make these following postulates:

(1) The use of a general anesthetic is limited to obliteration of consciousness, so that the patient cannot see what is being done.

(2) The burden of the prevention of pain and relaxation of muscles should be laid entirely upon thorough blocking of the field of operation by urea and quinin.

(3) If ether is used at all, it should be used in the least possible amount.

(4) Gas-oxygen is ideal in all cases where it is possible to carry out with it a thorough blocking of the field of operation.

(5) That ether is particularly dangerous in intestinal obstruction and acute infections, and that such cases should be done under purely local, or gas-oxygen and local anesthesia.

(6) That it is possible to do these operations without hurting the patient.

I have a syringe here, if anybody wishes to inspect, which I think will meet the requirements laid down by the author.

Dr. Charles H. McCully, Logansport: I have assumed that the function of a discussant is to consider the points raised in the paper rather than to attempt an exhaustive presentation of the subject matter. The doctor who has just preceded me has stolen some of my thunder, to use a common expression, and has said some of the things that I had desired to say, so that my discussion shall be shortened to avoid repetitions, which are perhaps of no value. Two or three things, however, have impressed me as militant to the use of local anesthesia in general surgery, and one of these questions has been raised by the speaker last on the floor, that of time, when he stated that the time gained in closure counterbalances the time lost in waiting for the effects of the local anesthesia and in the use of the local anesthesia. That has not been my experience, however. Anything that unnecessarily prolongs the exposure of the abdomen, necessarily adds to the risk of the operation.

One other fact that militates against the use of local anesthesia in general surgery is the additional number of instruments and solutions required. Additional instruments and additional solutions and multiplicity of paraphernalia also increase the hazard of infection, no matter how careful one may be.

These are questions that can scarcely be disregarded with the entire safety of your patient. The factor of uncertainty of the action of your patient is an important one to be thought of. It is a question as to whether or not you will be able to convince your patient that his operation is to be painless, and so at the critical time when the least movement on the part of your patient is fraught with great danger, when vital structures are involved in the incision and vital points are reached, he may add an additional hazard to your operation. There is also the fact that under certain conditions of general surgery your patient must be wholly relaxed and motionless. These four elements, the element of fear, and the question which was raised by the leader in discussion, with the elements of need of complete relaxation and motionlessness cannot be overlooked. The essayist said that fretful and unreasonable patients, fat patients, children and the rough operator, also acute inflammatory conditions, should be considered as being unfavorable to the employment of a local anesthetic. To a like extent, or, at least, to a considerable extent, they are contra-indications, or, at least, embarrassments to surgery in every aspect and under any anesthetic. Fretful and unreasonable patients do not do well after surgery any more than they do before, and unless you can overcome the fear of your patient, which involves a certain amount of personality which all operators do not possess, then you will do well to refrain from the use of local anesthesia to the exclusion of general anesthesia. I remember that a number of days ago while placing a number of stitches in the head of a colored man who had been injured, I endeavored to persuade him that I was not going to hurt him. I would say, "Now, this isn't going to hurt you," and take a stitch. He would flinch and flinch, and pretty soon he said, when I told him it wasn't going to hurt him, "Yes, sir, yes, sir, you-all say you won't hurt me, but I haven't got that much Christian Science."

There is, too, the element of shock from fear. I remember a few weeks ago having a case of a young man who went to the operating table for a clean appendectomy. He was in a marked state of shock, and we were really anxious about whether we could save him. There was absolutely no pathological reason for that state of shock, we were certain of that, and yet he was in shock to such a degree that three of us absolutely debated whether we should put him on the table, with the fear that he might, perhaps, die. We saw at once on opening that abdomen that there was no pathological condition there to warrant that shock. The appendix was bound down under adhesions and there were rather extensive pericolic membranes. The operation proceeded rather tediously. On regaining consciousness, he had no untoward results. It was fear. He was well-nigh scared to death.

And so, when we use our local anesthesia, we must not lose sight of the fact that we must

have absolute control at the operation, and the patient must feel that he gives you the most complete confidence.

Two questions dealing with this subject which I had hoped would be presented have been entirely omitted. My experience with local anesthetics has been rather limited, but I recall a number of instances in which a very considerable slough has followed the use of some of these local anesthetics, and I had hoped that the essayist might make some reference to the percentage of cases in which we might expect slough, delay in the healing, or some untoward symptom in the convalescence of these patients, due to the presence of this complication which occurs in the use of local anesthesia.

One other thing that may possibly crop out in the discussion is the exact dosage required in these operations. The essayist presented the maximum dose which may be used, but I do not recall that he stated the exact amount used in any operation.

I submit that it will be some time before we will have discarded the general anesthetic for the local anesthetic in these cases as they come today, tomorrow and the next day to us.

(Would you mind saying what kind of local anesthetic was used in those cases which were followed by sloughing?)

The quinin and urea-hydrochlorid. One case has been reported in which the solution was not used as an anesthetic, yet perhaps had slight anesthetic powers, but was associated with the novocain as recommended by the author.

(Have you had this trouble with cocain alone?)

Yes.

(Have you had it with novocain alone?)

No.

(With adrenalin and novocain?)

Yes.

DR. EDWIN WALKER, Evansville: I think the selection of the anesthetic is greatly a matter of temperament of the surgeon and the patient, and, as a rule, I prefer general anesthesia unless there is some contra-indication. There are, however, some cases in which there is a distinct contraindiction, and none more so than in operations on the prostate, in cases that have suffered with prostatic obstruction for a long time, who have developed grave diseases of the pelvis of the kidney and of the kidney itself. In such cases, anesthesia is especially serious and if prolonged is practically always fatal. Some three years ago I had a subject of this kind in which I had tried first to teach the use of the catheter and found that something had to be done for the man's relief. I used at that time novocain solution in the perineum and cocain in the urethra, as I generally do in all these operations. I as a rule use cocain in the urethra, because I find I get a more satisfactory anesthesia. Then, when the urethra was opened, I gave him ether for about ten minutes and during that time I enucleated the prostate. This patient made a very excellent recovery and is living to date. During this last summer, however, I have had two cases that were rather more desperate than this and where from all tests the kidneys were in very bad condition, the functional test showing the very minimum of excretion in both of these cases. I did the operation in both cases by local anesthesia alone. In these, I relied upon the cocain and novocain, and in these cases, too, I attempted to inject the capsule of the prostate. I do not know how successful I was with that, but they were both difficult subjects and I passed the needle in in the direction of the capsule of the prostate and infiltrated there very well. Neither one of these patients complained very much of pain. In the first one, the operation was very short, it was not a complicated operation, and he did not cry out nor complain at all scarcely. He said that he felt very little. The other patient complained of no pain until after the prostate was enucleated and then I had occasion to catch the bladder and draw it down to insert drainage, and he then complained of pain, but that was the only pain, he said, that amounted to anything. These cases were both of them very desperate cases, and they recovered rapidly and nicely. I think that in cases of this kind, it is a great advantage to use local anesthesia.

There are many objections to local anesthesia that have already been referred to, and not the least of these is the danger of infection after injection of the tissues. Also, in parts where dissections are necessary to be made, it does mask the parts. So I say I would use local anesthesia only when the general anesthesia is contra-indicated.

DR. M. R. COMBS, Terre Haute: Since the use of novocain in weak solutions, there is no doubt that local anesthesia has gained in popularity, and no doubt that it will continue to gain as we become more accustomed to it; but that it can ever in any manner supersede and take the place of general anesthesia, I am not at all prepared to believe. My limited experience and, particularly, my observations with regard to the case reports and the actual occurrences during the time of operation do not exactly coincide. I have rarely seen any considerable operation (those excepted of the most minor kind), but what there was pain evidenced by movements of the patient and otherwise, and I have noticed also that the advocates of local anesthesia say that it is necessary to give only sufficient morphia to produce a calm state of mind. My ex-

perience is that half a grain of morphin is usually necessary to produce that condition of mind, and I think that most of the persons who habitually use local anesthesia precede it with a good, stiff dose of morphia. That we can do serious operations involving these structures of the abdomen, under local anesthesia, I am not prepared to believe.

Now, it has been claimed that one of the principal uses of the local anesthesia is the prevention of the fear of general anesthetic pneumonias. In a long series of cases operated on in Hoffman's clinic in Vienna, where the local anesthetics were used, the proportion of pneumonias were exactly the same as where the general anesthetic was used. He advances an ingenious theory as to the cause of those pneumonias, his idea being that they occur with no reference in any way to the anesthetic, but are rather due to the condition of the patient, the weakened condition of the patient after any sort of an operation, in which there is always some trauma after which they lack energy to cough and bring out the sputum. His method of preventing these pneumonias was by directing the patient to be placed in the upright position and insist upon them coughing in order to bring up the sputum.

Dr. Leonard F. Schmauss, Alexandria: I did not expect to take part in this discussion and have little to say except to emphasize the statement which was made by the discussant who has just left in regard to the use or rather preference of the local anesthetic, especially in regard to the effects of a general anesthetic on the lung and relative to the causation of pneumonia. It was brought out in the last paper. With reference to tubercular conditions of the abdomen, I think it was Dr. MacCoy who mentioned the fact that it was dangerous to use general anesthesia in cases where tuberculosis of the lung was present. Now, if we take the pains to examine our patients before operations, we shall probably find that in twenty-five or more per cent. of all operations there will be present an incipient disease, that there will be many cases of latent disease of the lungs, and I never saw one case in all my experience in which a tuberculosis of the lung was in any way exaggerated or was converted into an active condition. I have no objection to seeing a good many getting very enthusiastic in regard to the use of local anesthetics; but I do not like to have it done at the expense of ether, or at the expense of any other safe anesthetic, because the effects of the local anesthetic, or the effects of the conditions under which the local anesthetics are used, are often just as bad as if the general anesthetics had been used. The amount of fear, the amount of agitation on the part of the patient, will undoubtedly do as much harm to the patient as a general anesthesia properly given will cause.

Now, it is not true that a local anesthetic will avoid gas pains. Your patients will have gas pains just the same. It is not true that the local anesthetic will in all cases relax the abdominal walls, and I would like in the closure of the discussion to have it brought out whether in an operation for peritonitis, for instance, in which we have an abdomen which is rigid, if your local anesthetic will in this case relax those abdominal walls. If that is the case, I would like to know it.

Now, in regard to the technic of an infiltration, it is said, "Why, just infiltrate your nerves and that is all that is necessary." Now, to hunt for small nerve trunks and inject them, I find is not at all simple. If you simply inject through the area, just infiltrate through the skin incision and subcutaneous tissue and then inject through a tumor or around a field of operation—for instance, in a thyroidectomy inject clear down to the base of the thyroid gland, or in the case of a herniotomy inject clear down around the sac of the hernia—if that is done, we do not have to hunt up any nerves. The anesthesia will be perfect and there will be no pain. But, on the other hand, I know from a personal experience that the feeling you experience from a local anesthetic, even when there is an absence of pain, is not very pleasant. There is a very disagreeable grinding or gnawing sensation which is not a very pleasant thing to endure. As to the method used, or rather the drug used, I have employed cocain exclusively and in one-tenth per cent. solution it can be used quite freely up to two ounces, which is more than is necessary in any case. I would like to ask in closing how much adrenalin can be used safely. I think that is a question which has not been cleared up.

Dr. Horace R. Allen, Indianapolis: I do not want to throw any wet blankets on the subject of local anesthesia, and I cannot entertain you, but I can ask one question of all of you that I would like some one of you to answer. Have you ever got complete union in a cleft-palate operation where you used any one of the local anesthetics? I believe their use interferes with the union of a cleft palate. If some one has succeeded with it, I would like to hear from him.

Dr. J. R. Eastman, Indianapolis: Is there any one who would like to answer Dr. Allen's question as to the probability of slough in the case of the use of local anesthesia in cleft-palate operations?

(Dr. Allen: Not only slough, but failure of union.)

If not, the Chair will devote one minute to that subject. I have, personally, used local an-

esthesia in cleft-palate operations, and whereas I admit the possibility of slough I think it is extremely slight if the percentage of adrenalin is low enough, and 1-5000 is strong enough to blanch the tissues of the soft palate. If the injection is made at the area at the point of emergence of posterior and anterior palatine nerves on each side, and if the needle is introduced on the line where the incision is made to raise up the lateral flaps and the needle is pointed so that the point of the needle passes almost to the edge of the cleft where we are to push off the edges to freshen, then we can anesthetize the whole area with a very little bit of the novocain and with a very little of this very weak solution of adrenalin added to it, and I think that the added precision with which we can coapt the edges when we have not the blood to contend with—and we do not have the blood to contend with if we use this low percentage of adrenalin, which makes it a practically bloodless operation—I think this greater precision is a distinct advantage. It makes me very sorry to seem controversial with Dr. Allen, but I do truly believe that there is nothing that adds so much to the performance of cleft-palate operations as local anesthesia, as enunciated by Professor Kroeger, of Berlin. The possibility of slough is there, but it is extremely slight if we do not use too high a percentage of adrenalin; but if we use too much adrenalin, then, of course, we shall have trouble.

(DR. ALLEN: How much do you use?)

1-5000 is strong enough.

(DR. ALLEN: I think that 1-5000 solution in the case of a cleft palate would probably produce a slough in the very delicate tissues of the new-born, or it might do so.)

In my experience, Dr. Allen, I find that this will produce a blanching of the tissues there so that you can do a cleft-palate operation without blood, so that the child is not swallowing blood and there is not the danger of strangulation from blood flowing into the throat, and we do not use a general anesthetic in operations on very little children. It never had any purpose in the world, and has always been very dangerous. And I hope that Dr. Allen will not feel that I am controversial with him when I say that I do not think that anything in the whole history of cleft palate operations has done so much to advance it as the use of local anesthesia. In the hands of Kroeger it has become a polyclinic operation. He does it in his office and sends the patient home for the mother to take care of and has done so for a good while. I find that he has the best statistics that are available.

(DR. ALLEN: It is fine. There is no blood. However, I do not get it healed up; I do not get union.)

DR. CHARLES O. BECHTOL, Marion, closing: I have made a few notes on the criticisms and the discussions that have been made, but I will not detain you more than a minute or so.

As for the psychical effect, I stated in the paper that it was necessary to select the cases. With nervous people you should not attempt it; but with any one who is anyways reasonable, if the man is composed, if the deportment of the operating room is what it should be, the psychic effect is practically nothing. Understand, this is not an argument for local anesthesia alone. I have given some of my results, but I would rather make this a plea for the use of local anesthesia, if necessary, combined with other agents, the use of morphia, veronal or any other agent that will help in the psychic effect. I have had only one case where the patient became excited, and that was after a long operation on a goiter when the effects of the anesthesia had worn off and the patient became slightly hysterical. Otherwise, I have seen no depression, no psychic depression after coming into the operating room.

As to whether or not ether or nitrous oxid should be used, it has impressed me in this way. At the beginning of an operation under local anesthesia, if you can continue with it, do so; if you cannot, a very little bit of ether will do as much as nitrous oxid; and if you do need a deeper anesthesia, it makes no difference with which you start, you must continue with ether.

The question of slough has been brought up. I used quinin and urea when that first came out, in a minor operation, that of taking off a toe, and it certainly did slough and I have never used the two since.

The question of dosage: How much can be used? Dr. Mix has told you a larger dose than I have ever used. I make about two to three ounces of a one-half per cent. solution. In ordinary operations five grains are all that is necessary. Ordinarily five grains will be the amount of novocain used, and as to the amount of adrenalin, about six drops, six to ten drops, of a 1-1000 solution is about all that is customary.

Dr. Schmauss referred to the use of ether in tuberculosis. The surgeon does not have the chance ordinarily to see the effects of his anesthetic. I do not like the effects of ether in pulmonary tuberculosis, because I have been told by the men who see a great deal of tuberculosis that it does wake up latent tuberculosis. For that reason, I would not care to use a large amount of ether, and, as we can reduce the amount of ether by the use of local anesthetics, it would seem the proper method to employ in such cases.

As for Dr. Combs' discussion, I only have to say that the cases I report have been my own and I have tried to give a faithful picture of what happened at the time of these operations.

SURGICAL TUBERCULOSIS OF THE ABDOMINAL CAVITY

V. A. Funk, M.D.
VINCENNES

Tuberculosis of the abdominal cavity has long ceased to be a clinical entity, but the surgery of this pathological condition is still a much mooted question. It is so very frequently impossible to ascertain the organ affected that it might be classed as a term covering a general symptom group.

The pelvic organs, the appendix, the mesenteric glands, the intestines and the peritoneum itself are the strongholds of the disease, and as to frequency, affected in the order given.

The stomach is fairly immune from the infection, due perhaps to the bactericidal power of the hydrochloric contents of the gastric juice, although some few cases have been reported. Rousing thinks that it is not improbable that when the attention of the surgeon is more generally aroused to the possibility that surgical stomach ulcers are not uncommonly of tubercular origin it will appear that no small percentage of the cases of pyloric stenosis and ulcers are in reality of tubercular origin; and when directed to the possibility of contracting callous and even perforating stomach ulcers being of a tubercular nature, will greatly increase the number of these cases and make the tuberculous stomach ulcer an important chapter in gastric surgery. The only way to obtain this development is the subjection of every specimen to a microscopical examination. The duodenum is seldom affected, possibly because the passage of the food is rather rapid, thereby hindering bacterial invasion. In the small intestines we find the disease more frequently, and especially is this true in the last few inches of the ileum, where Peyer's patches are most abundant. It has been proven by experiment that the tubercle bacilli may enter through the intestinal mucosa and lodge in the mesenteric glands, leaving behind no demonstrable evidence of their entrance. Some pathologists claim that the glands are always affected primarily and the intestines secondarily, but Ravenel collected over four hundred cases which were unmistakably primary in the intestine, the large percentage of which were in the ileocecal region. Limited to the intestine this infection is notoriously a disease of childhood, and the largest proportion of which is found in the children raised on cow's milk. Here the theory of primary mesenteric gland involvement has numerous adherents. Much of the intestinal infection of adult life found in rural districts no doubt originates from their large consumption of uncooked milk. In our home state, where we have no laws governing the testing of our dairy cattle for tuberculosis, this would hold good only because of the inability of the city people to afford the abundant supply of milk.

The stagnation of the fecal current in the cecum and its lodgement within the appendix makes infection very easy at this point, 85 per cent. occurring at this region, about 60 per cent. of which occurs between the ages of 20 and 40.

The ileocecal region, from the stagnation of the current, the abundance of lymphoid tissue, and the frequent inflammatory conditions, is not only a favorable primary atrium for the tubercular invasion, but swallowed bacilli escaping the stomach fluids cause it to be a frequent secondary site. Tuberculosis of the appendix without involvement of the cecum is very rare. Connell found one primary infection in three hundred appendices examined histologically. However, Lockwood claims that 2 per cent. of all appendicitis cases are tubercular.

Louis was the first to recognize and interpret the possibility of many of the chronic peritonitis cases having a tubercular origin. Koing then came forth with the conception that tubercular peritonitis was amenable to surgical treatment. By accident, through a mistaken diagnosis of ovarian cyst, Wells in 1862 operated on a localized tubercular peritonitis with excellent results, thus unwittingly laying the foundation for the many cures which have followed. These localized conditions have been confounded with floating kidney, hydro and pyonephrosis, tumor of the kidney, mesentery and omentum. Cummings out of three thousand autopsies found a tubercular peritoneum in over 2 per cent. Of those that were tubercular patients 11 per cent. had peritoneal involvement. Forty per cent. occurred between the ages of 20 and 40. Autopsy reports show the proportion of males to females to be two to one, but statistics at the operating table reverse this proportion to over four to one, probably accounted for by the frequency with which tubercular peritonitis becomes a sequel to infection, either originating or flourishing in the fallopian tubes. We must consider also the increased number of female abdomens opened. In children the proportion is about equal.

A few years ago there was considerable controversy as to whether tubal tuberculosis is primary and causative or the result of tubercular peritonitis, but I think now the surgical world has thoroughly settled the question in favor of the former theory. We acknowledge the inva-

sion of the peritoneum from a tubercular vas. Why not from the tubes, which are so much more prone to this infection?

A diagnosis of a tubercular infection within the abdomen cannot always be made with certainty, but why delay when an exploratory laparotomy will lay aside all doubt and do no injury if the pathology proves inoperable. In a suspicious case, tuberculin injection will usually clear up the doubt.

On opening the abdomen, when no obstruction is present, the escape of a clear serum, and especially if it contains flocculi, tubercular peritonitis is the most probable explanation. Yet, we may have rather extensive pathology with no fluid whatever. In a recent case of tubal infection, with extensive adhesions, there was nothing in the history or macroscopical appearance of the case which suggested a tubercular infection, although the laboratory report returned positive. I operated a right inguinal hernia in August which had become irreducible. The sac contained nearly the entire omentum. An indurated mass of the omentum showing scar tissue areas was removed, which proved to be of tuberculous origin. This patient was a young foreigner, robust, and in perfect health as far as he knew. Another patient came to the hospital the same week with symptoms of partial obstruction. A large mass was palpable in the left tubal region bimanually. A diagnosis of salpingitis with adhesive obstruction was made, which was confirmed at operation, the small intestine being almost completely obstructed in two places, allowing only gas to pass through. The pathological examination of the mass removed showed the infection to be tubercular.

In the early years of operative treatment for tubercular peritonitis simple laparotomy only was employed, and cured some cases. Then the recovery was attributed to various agents, such as air, light, irrigation, antiseptics, drainage, etc. We know now that drainage should seldom be considered in tubercular infection, that the air and light must have access to the germs for a longer period than it would be practical to leave the abdomen open, and that antiseptics should not be used extensively in abdominal work.

In 1904 Murphy demonstrated that if the communication between the sources of infection and the peritoneum were cut off, even if the focus was not removed, the ascites would not return. When the focus, located in the tubes or appendix and floating free in the ascitic fluid, is allowed by the removal of that medium to come in contact with the surrounding inflamed surfaces, might not then the localized primary focus be walled in by adhesions and prevent the reforming of the ascites?

We are indebted to Mayo by his systematic tracing of his cases that relapsed, and finally were cured by subsequent operations by removing the organs affected, for the idea of removing, if possible, the primary focus of infection in abdominal tuberculosis. Murphy about the same time was working along the same plan.

The excellent results obtained in the first few cases operated by the above theory caused the pendulum to sway far over to the surgical side of the treatment of this condition, especially when it was accompanied by ascites. Some confined themselves to the ascitic variety, considering the adhesive type beyond surgical control, except emergencies, as acute obstructions, and even then with a degree of hesitation. Billings at this time thought the abdomen should never be opened in the fibrous type.

In theory the local focus of disease which has caused the extension of the process should be removed, whether this be the appendix, fallopian tube, a portion of the intestine or any movable organ; but this is not only at times impossible but is frequently not practicable. One or two enlarged mesenteric glands can easily be removed or if suppurating incised, but it would be nonsense to attempt the removal of many such glands when tuberculin is giving such excellent results in the glandular infections. At present the tuberculin has superseded operative measures by some, and good reports appear in our literature by the combined tuberculin and x-ray treatment of abdominal tuberculosis.

I believe, however, that this is drawing the pendulum back too far. I am a staunch advocate of tuberculin in all tubercular affections, if administered correctly, but I believe that the administration in abdominal tuberculosis should usually be preceded by a sharp scalpel. Murphy removes the original focus when possible, but when in the intestine he does not resect if the entire peritoneal covering is involved, or when the gut is adherent to the abdominal wall, for when the peritoneum is studded with tubercles, or adherent, even by the fine veil-like adhesions so frequently found in tubercular infection of the abdomen, and he is unable to find a non-affected site for his anastomosis, it has been his experience that the line of incision will not heal and a fistula develops, the closure of which is almost, if not absolutely, an impossibility. It is sometimes possible to do a short-circuiting of the intestine in

the acute obstructive cases when an excision is unwarranted.

Abdominal tuberculosis is at times a very perplexing condition. The ability to consider all the circumstances and to select the best method of treatment for each individual case, and the tact and skill with which the treatment is carried out will determine the results of surgical intervention in tuberculosis of the abdominal cavity and accordingly will our patients be relieved.

La Plante Building.

DISCUSSION

Dr. G. T. MacCoy, Columbus: It is not very often that a general practitioner is asked to open the discussion of a paper in the surgical section, and I therefore esteem it quite an honor to be so called upon. I hope that I shall conduct myself humbly though, so as not to excite any animosity.

It has been my good fortune to see a good many abdominal operations, and most of them have been from my own diagnosis, and I am very proud to say that the surgeons generally in operating upon my recommendation have not found what might be termed a "dry hole," but it is not much of a surgeon that cannot find something to do when a belly is opened. From my experience and observation, and from looking over the history of some abdominal cases, I am inclined to believe that tuberculosis of the organs in the abdominal cavity is quite often overlooked. Whenever the belly is opened for any purpose and free fluid is found, no difference in how small a quantity, it should excite our suspicions at least, and a thorough investigation be carefully made of the peritoneum and its contents if the condition of the patient will permit.

Tuberculosis is no respecter of tissues. It occurs quite frequently in some localities, and very rarely in others. The essayist has spoken of the stomach; I believe that only six cases have been recorded of tuberculosis of the stomach—at least that is the report. It is claimed that tuberculosis of the peritoneum and of the intestines is generally secondary to an infection in some other region, but a respectable minority of primary cases occur. It is quite a well-known fact, as stated by the essayist, that ingested tubercle bacilli do enter the stomach or intestines and may pass through the walls and leave no mark behind them, being carried by the lymph channels or the bloodstream and lodged in some distant organ in some place of least resistance, preferably the lung.

While the heated controversies of Koch, Ravenel, and others as to the identity or duality of human and bovine tuberculosis have very markedly directed our attention to intestinal tuberculosis, I cannot see that they have added very much to our pathological knowledge.

The diagnosis of abdominal tuberculosis is not always easy. It might be stated that it is always difficult, and only an exploratory incision is sufficient to determine the condition in many cases. In the hyperplastic, ileocecal form of intestinal tuberculosis, the predominating symptoms resemble those of chronic, recurrent appendicitis or of chronic intestinal obstruction. Pain is more or less severe, there is muscular rigidity, and we have from time to time a diarrhea alternating with constipation. The belly is not infrequently opened upon a diagnosis of chronic appendicitis, to find the ovaries, tubes, mesenteric glands, the peritoneum or other structures the seat of a tuberculous infection. Tuberculosis of the appendix is also not a rare disease.

Some time ago I witnessed an autopsy performed upon a man of middle age who had died of typical Addison's disease. The diagnosis had been made by some very renowned gentlemen in Indianapolis and other parts of the state. Upon examination we found caseous degeneration of the adrenals, we found tubercular lymph nodes in the spleen and the liver, and we found caseous and calcareous degeneration of the mesenteric glands. Cannot we think of a good many of our cases of Addison's disease as tuberculosis of the adrenals?

Primary local peritoneal tuberculosis is occasionally, though very rarely, seen. In the great majority of cases of peritoneal tuberculosis, other adjacent structures are involved. In half the cases, the lungs are involved. Or it may exist as a general disease, and there may be advanced disease of the peritoneum in chronic tuberculosis without any marked symptoms or clinical signs. If the mode of entrance of tuberculosis from the intestine to the body is by the lymphatics of the ileocecal region, we are safe in assuming that tuberculosis of the mesenteric glands also originates in this way. I believe that the essayist said that tuberculosis of the mesenteric glands might as easily occur directly from the intestines, as we know it occurs sometimes from the lung. I believe you all know the experiment of feeding the hogs tuberculous materials and finding later no disease in the intestines whatever, but lodged in the lung tissue there will be great numbers of the bacilli. Cases of primary mesenteric tuberculosis quite frequently simulate acute appendicitis or acute ileus.

Chronic tubercular peritonitis generally occurs in one of the following three varieties—the ascitic, the exudative or the fibrinoplastic, and the caseous, although these may be stages, simply, of the same disease. The treatment of these latter stages is not likely to be crowned with any very great success. In the exudative form, the adhesions are so firm and so exten-

sive that little can be done for the relief of the patient, as to attempt to separate the adhesions is likely to be followed by perforation, extensive hemorrhage and fecal fistula. The ascitic form, however, is amenable to treatment in a number of cases. A considerable number of these cases will respond to hygienic and internal treatment, and such treatment should be tried in most cases before resorting to operation. If a trial of medical treatment continued over several weeks is not attended by success, or if the effusion and the distention of the abdomen increases, we should immediately perform a laparotomy. This should be done under local anesthesia, and should be followed by dry sponging and closure of the wound, generally without drainage. Chloroform or ether should not be used in these cases, if possible to be operated on without them, as both have a tendency to excite a latent tuberculosis, converting it into an active process, especially in the pulmonary form. I think that at the American National Association for the Study and Prevention of Tuberculosis it was the consensus of opinion, of the leaders of the discussion at least, that ether was far more dangerous in the latent stages than chloroform, although both were dangerous.

The manner in which laparotomy cures these cases is to me unknown, but it cures them. Hygienic measures are just as necessary—that is a point that I stand for particularly—hygienic measures are just as necessary in surgical tuberculosis of any part of the body as they are in tuberculosis of the lungs, and the cure is brought about by the same means. Our great rule should be, "Rest for the tuberculous part, and a life in the open air." Plenty of good food, freedom from pain, and rest in the open air are conducive to happiness and inspire hope, the greatest of all tonics.

DR. J. V. REED, Indianapolis: The doctor's paper and Dr. MacCoy's discussion have covered many points in the subject of tuberculosis of the abdominal cavity, and there are just one or two points that I wish to touch upon. The essayist's paper makes mention of the fact that if we are in doubt as to the existence of tuberculosis, the tuberculin test may be of value. If we rely upon the tuberculin test in making a diagnosis of tuberculosis in any particular organ or region of the body, we will make that diagnosis very often, because it has been found that probably 90 per cent. of all individuals have, or have had, tuberculosis. Now, I make a tuberculin test very frequently. I use the von Pirquet. I do not do it as a routine practice, but often I use it, and I find that in many cases it is one little form of evidence that may confirm other data, but I do not feel that I would ever allow a tuberculin reaction alone to make the diagnosis of active tuberculosis, because a patient who is perfectly well, who has a perfectly healed lesion, may give a perfectly frank tuberculin reaction. Again, a negative reaction is of positive importance in a patient who is not very ill. A patient who is dying of the disease has a resistance so low that he cannot get up a reaction; but if the patient is up and about, in fairly good health, and gives a negative tuberculin reaction, I feel that that is a very good sign that that patient is not tuberculous. He is one of the lucky 10 per cent. That is the point that appeals to me most in the discussion of tuberculous peritonitis, tuberculosis of the abdominal organs; and, in fact, I do not believe that we can diagnose tuberculosis of the different organs until after we have a pronounced tuberculosis; I know that I cannot.

Now we come to treatment. I believe that when we consider the treatment of tuberculosis of the peritoneum we have the same general problem to consider as in the treatment of tuberculosis in general, such as tuberculosis of the glands, the bones and the joints. Now, in my opinion, in my experience, there is one thing that I believe that I have learned with a great deal of certainty, and I have learned it through sad experience; that is, the more conservative I have been in treating surgical tuberculosis, the better the results that I have obtained. When I was a student it was at that time the fashion in dealing with tubercular glands of the neck to remove the entire mass, glands, fascia and all, en bloc, the same as in operating for carcinoma. Four or five years later, these cases came back with stiff neck or some other condition necessitating further treatment. This treatment became modified after a time, and I have got down to a place now where I have cured these cases of tuberculosis of the cervical glands by repeated aspirations of the purulent ones and leaving the others alone. Now the same thing, I believe, holds good with the bones, the joints and with the peritoneum. When we open up an abdomen and find the peritoneal surface covered with tubercles, the appendix, the tubes, the ovaries, the uterus, the cecum, etc., we cannot take out all of it; in fact, we get along better if we do not try to take it out. The question is, why do these patients get well when we open them up? I think they get well the same as patients who have typhoid, pneumonia or scarlet fever—that is, that they have the physical ability to form in their blood antibodies able to overcome the invading organisms. Now, in tuberculosis we have a chronic infection; in these others I have mentioned, an acute infection. It has been shown by Wright and others that in chronic cases by using a vaccine we can increase these antibodies in the blood and get an immunizing result, theoretically. It has been attempted experimentally, and it has been found that if we could inject living instead of dead organisms, we would get better results. It has been suggested that in this simple conservative

process for the treatment of tuberculosis that the thing we actually do to bring about a cure is to liberate a few living bacteria in the tissues so that they act as an auto-vaccine. Now, that is a reasonable theory, it is a theory that seems to work out in practice.

I have had quite a number of cases of tuberculosis of the peritoneum, and I cannot say that I have ever had any more satisfactory cases than these. I have never removed an appendix, ovary or tube but what I regretted it. Those were the cases that did not turn out well. Those plastic fibrinous adhesions of the peritoneum, when you try to loosen them up, get you into trouble, or the patient dies, but when you go in, open up your fibrous adhesions, letting out your fluid, wiping out the peritoneal cavity, liberate a few bacteria into the blood-stream, you put the patient into a condition of immunity and he responds to treatment.

Just a few months ago I had the pleasure of taking care of a case for Dr. Ketcham. The patient was a girl with an enormous mass, almost like a full-term pregnancy, complicated with a hyperthyroidism, some fluid present in the abdominal cavity, the patient very ill. The patient did not wish a laparotomy, but did not progress well, and one morning, under nitrous oxide anesthesia, we opened the abdomen. There were the lymphatic glands enlarged, an unusual type, the ileac glands pressing the uterus up in front, and a lot of ascitic fluid. Now, what would have been the use of taking out the glands in this case? She would have died if I had. I simply opened up the abdomen, wiped out the fluid and closed. She had a rather stormy convalescence, but has gotten up and about, and Dr. Ketcham tells me that she is getting along very satisfactorily.

I feel very positive about this point in tuberculosis of the peritoneum, as well as tuberculosis of other parts of the body. Vaccine is a good thing, and the best vaccine is that which is made from the patient's own individual germs, gently turned out into the blood-stream by these very simle, conservative operations.

Dr. Melville F. Boulden, Frankfort: I wanted to ask a few questions in connection with the discussion of this paper. I have under observation at the present time a patient who ten months ago had what another physician diagnosed as malaria. One month later the case cleared up moderately well. She lost about thirty pounds weight in that length of time, and never regained it. She had the von Pirquet test for tuberculosis, which was negative. She was sent to Colorado for tuberculosis, and they found no tubercle bacilli there. I do not remember what test they gave her. They had a sputum test made, however, at the state laboratory, and it was negative. In Colorado she had the Wassermann test made; reaction positive. She returned to her home, and has had ascites since her return. One physician diagnosed the condition as an ovarian cyst. She was sent to a good man in Indianapolis, who diagnosed the case as specific, taking all the history into consideration. She was tapped two weeks ago, and the abdomen is now full of ascites again. She does not care to be operated on. I have suggested opening her abdomen. (Has she had specific treatment?) She has had specific treatment, yes, sir. She was given a mixed treatment in Colorado. Her appetite improved and her general condition improved in every way except that the ascites came on. The family think the mixed treatment caused the ascites. Now, what am I going to do with that patient? Should she be opened? Should she be sponged, as this doctor here suggested, should the peritoneal cavity be sponged? Or is it a specific case? On vaginal examination the uterus is movable; we cannot find a tumor anywhere in the abdomen; the liver is normal; the spleen is normal; we cannot find a lump on the peritoneum; we cannot find enlarged glands. (How about the liver?). The liver is normal. (Kidneys normal?) Yes, sir, the urine has been examined. Previous to the tapping of this abdomen there had been no temperature in six months. Since the aspiration there has been a rise of temperature running from 99 degrees in the forenoon to 101 degrees in the afternoon, and I believe it ran to 102 degrees the second day after the tapping. Since that time it has been running from 99 to 101 degrees. There was a six months' period there that she had no rise of temperature. I just wanted to ask the question if any one has had experience with such a case and what would be advised.

Dr. J. R. Eastman, Indianapolis: As the essayist, Dr. Funk, is not present, I will call for volunteers to answer the questions of the last discussant.

Dr. G. T. MacCoy, Columbus: I want to say that it is impossible to make a diagnosis of enlarged mesenteric glands with the belly full of fluid. No one can do it until he empties the cavity. In this case it is evident that he has done what many people do in the treatment of empyema. He has aspirated when he should have done a radical operation. To aspirate a chest filled with fluid will often convert a latent case into an active one, and you will have a rise of temperature as surely as day follows night. I believe there is no case where aspiration was performed on a chest filled with fluid but has been aggravated by that treatment. I have known this to occur in a case where there had been weeks of normal temperature, and the same thing, indeed, has taken place in every case that I have known where tapping has been done. I believe that is one of the most foolish wastes of time in medicine or surgery—tapping for fluid. It simply converts a case of uncertainty into one of certainty. As far as effusion

is concerned, you can see when you open, and you then are able to get at the condition. In the case reported here, there is nothing in it that would conflict with a diagnosis of peritoneal tuberculosis. The absence of temperature may occur in tuberculosis in any part of the body and it may be a condition lasting over a year or so, and yet the disease be there all the time. It is not always an active process, and tapping this abdomen would, in my opinion, simply aggravate the trouble you already have. On the other hand, I would recommend a free incision, removing the fluid, and mopping it out by dry sponging. My objection to irrigation of the abdominal cavity came up a good many years ago with a case which was first tapped, then opened and the belly washed out with salt solution, and I am satisfied that the process was made an active one and general by that fluid carrying the infection all over the peritoneum. In the case reported, I see nothing in the way of a diagnosis of peritoneal tuberculosis.

DR. H. O. PANTZER, Indianapolis: The title of this paper, "Surgical Tuberculosis of the Abdominal Cavity," has set me to thinking as to where I stand at this time. Perhaps inadvertently "surgical" was put in there. You will remember that at first we regarded every case of peritoneal tuberculosis as absolutely incurable, and that afterwards by surgeons it was put in the category of cases that were curable by laparotomy. I believe with Dr. Reed that these cases are cured by incision, by exciting an intense peritoneal absorption and getting thus over the abdominal interior an auto-vaccine which goes to combat the disease not only in the abdomen, but also in other organs, as was proved to me by one case in particular. I was called to see a young girl in the early twenties, who had a tubercular condition of the lungs so far advanced that she had to be pronounced as practically moribund, as hopelessly ill, at least, and I was called to see her when she had from the excessive involvement of the peritoneum an intestinal obstruction. She was vomiting all the time; pulse fleeting, 140, 150, 160; with a miserable general condition, with a hopeless condition in the lungs and abdomen. I assure you it was very hard to tell what to do. She was having so much pain from this trouble, and it was so distinctly a tubercular disease, as I regarded it. I felt no hesitancy in proposing to the parents that I would make an incision, liberate the bowels, and to that extent relieve her, and that I was not willing to say much as to the future outcome. The parents consented. In that case, following the operation, we had a terrific toxemia develop, within the first twenty-four hours, so much so that we had to deal with convulsions from it, toxemia evidently from the absorption that was simply terrific in quantity. That patient in the sequence is well. She was then about twenty-three. At twenty-six she was two inches taller than when I operated. She is a well girl. That was some ten years ago, and I was told a few weeks ago by her mother that she was in perfect health. You can find the evidence of the big cavity there, but it is absolutely an obsolete tuberculosis.

DR. MELVILLE F. BOULDEN, Frankfort: Mr. Chairman, I want to explain my position in this matter. (Permission given by Section.) The doctor from Columbus stated that it was a very foolish matter for me to tap that abdomen. I did it merely as a palliative measure, as the patient would not permit me to make an abdominal incision, which was my wish.

DR. MILES F. PORTER, Fort Wayne: I would like to suggest that after tapping that abdomen you inject some of that fluid into a guinea-pig and see what happens.

THE SURGICAL ANATOMY OF CLEFT PALATE*

JOSEPH RILUS EASTMAN, M.D.
INDIANAPOLIS

The object of this paper is to emphasize the importance of preserving the blood supply of cleft palate flaps especially by the avoidance of lateral incisions or by making them if they are necessary, as small as can be and placing them systematically. Lateral incisions are rarely necessary.

The subject of the surgery of cleft palate has always been one of discouragement and dissatisfaction to surgeons. Few indeed are the operators who can present statistics like those of Mr. James Berry of London, in whose list of 154 operations there was only one complete failure. One who has studied Mr. Berry's statistics, witnessed his operations and noted his end results, cannot but conclude that his notions of cleft palate surgery are rational. He, like other successful palate surgeons, avoids long, paralyzing lateral incisions for the raising of flaps. One cannot lay too much stress on the fact that the omission of long lateral incisions means conservation of the blood supply to the united margins of the cleft. Failure in palate operations can often be traced to indifference or uncertainty on the part of the operator as to how provision can be made for arterial communications into the flaps. Naturally in deciding in any case the question of whether lateral incisions are necessary, the principle that there must be no tension upon sutures cannot be

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slighted. No sutured cleft palate will heal if the coaptation sutures are under tension. However, lateral incisions are not often useful in the matter of preventing tension. If the flaps are freely and completely elevated from the hard palate, the soft palate split along the edge of the cleft and the tensor palati aponeurosis divided, there is usually no trouble in bringing

Fig. 1.—Descending palatine and branches in posterior palatine canal and groove along inner aspect of alveolar process.

the lateral halves of the palate together without tension and when they are thus drawn together they are red and vascular and in the most favorable condition for union.

The blood supply of the hard palate is derived chiefly from the arteriae palatinae major and minor, which are the two divisions of the descending or posterior palatine artery, a branch of the internal maxillary. The larger vessel passes down the posterior palatine canal and emerges from the posterior palatine foramen which is internal to and behind the last molar tooth in the adult and the last premolar in the infant. It runs forward in a groove on the inner side of the alveolar border of the hard palate to the anterior palatine canal, situated near the midline just behind the incisor teeth, where the terminal branch of the artery passes upward to anastomose with the nasopalatine artery. It sends branches to the mucous membrane of the hard palate and the palatine glands. The smaller division of the descending palatine goes to the soft palate.

The blood of the soft palate comes largely from the smaller division of the posterior or descending palatine and also from the inferior or ascending palatine of the facial artery and ramifications of one division of the ascending pharyngeal, the smallest branch of the external carotid. The ascending palatine anastomoses with the posterior palatine. In the making of lateral incisions this large trunk passing between the posterior and anterior palatine foramina, sending its largest branches medialward under the palatine mucosa, is extremely likely to be divided or even split for a considerable distance, for it is in the groove followed by the vessel that the knife blade fits and runs most easily. If the lateral incision is made mediad to the large trunk, important branches are probably severed.

After severe hemorrhage due to such an accident the flap on the corresponding side will usually be observed to be quite blanched and ischemic, a condition very unfavorable to union.

Sir Arbuthnot Lane in his turnover flap operation severs practically all of the arteries which enter the flap excepting the very small branches which enter along the margin of the cleft where the flap is turned over. Such poorly nourished flaps do not always die nor do they always live. Certainly their viability varies with their blood supply, other things being equal.

A surgeon is unfair to his patient and himself if he fails to minimize hemorrhage in every possible way during cleft palate operations. Avoidance of injury to the palatal vessels and the consequent hemostasis are of obvious value

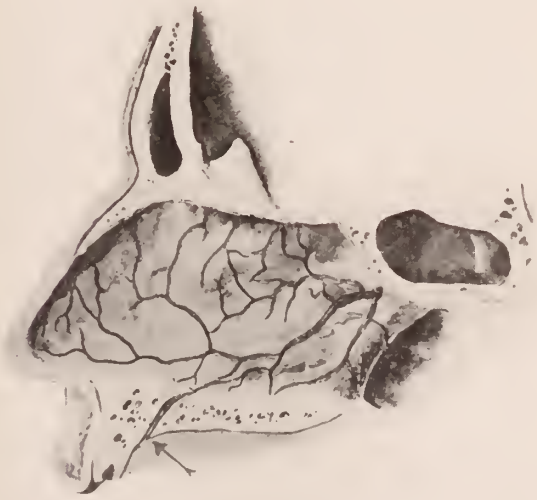

Fig. 2. — Anastomosis with the a. palatina major in the canalis incisivus. (Piersol.)

in keeping the field clear for accurate work. This is not a slight advantage. Ofter in a small mouth and irritable pharynx the presence of blood suffices to make a "dismal swamp" operation of what otherwise would be a comparatively simple affair. But as essential as the blood-free field is to precise work, there is a much more important aspect of the hemorrhage question.

The hemorrhage not rarely leads to a fatal result, perhaps through shock, perhaps through swallowing of blood with its fever inducing constituents, perhaps through the general affect of lowered vitality. For many reasons that operation is best which can be performed with the least injury to blood vessels.

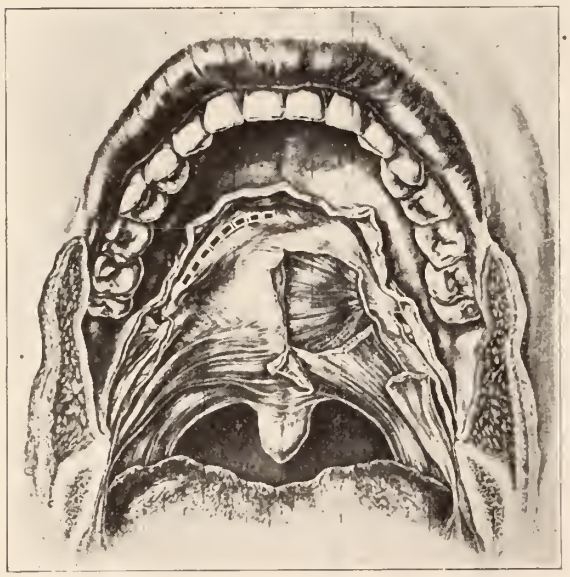

Fig. 3.—Dotted line shows attachment of aponeurosis of tensor palati to posterior border of hard palate. Severing this attachment a most important step. (After Deaver.)

The well-known evil effects of hemorrhage may be circumvented with considerable certainty by the expedient of avoiding lateral incisions, or if such incisions are absolutely necessary, making them after the flaps have been elevated and the lines of tension determined, so that only small incisions properly placed are required. It is then usually easy to relieve tension by making very short incisions either lateralward or medialward to the descending palatine or at a safe distance in front of the ascending palatine. If in a case of very high arch of the hard palate with narrow cleft it should seem advisable to elevate the hard palatal flaps through a lateral incision which should be just large enough to admit the raspatory or knife blade. In making the incision the course of the principal vessels cannot be ignored.

Two of the larger palatal nerves, the anterior palatine and the middle palatine nerve from Meckel's ganglion, correspond in their course and distribution to the two divisions of the descending palatine artery and would be endangered by any incision which would divide the vessels. The muscular nerve branches, that is, the posterior palatine from Meckel's ganglion and filaments from the otic ganglion and the pharyngeal plexus would of course be divided by a lateral incision which would divide the palatal muscles.

The anterior part of the soft palate next to the hard palate for a distance backward of 8 or 10 mm. is composed of fibrous aponeurosis, therefore this portion of the palate is quite fixed and must be detached in order that the corresponding side of the soft palate may be moved toward the median line. This simple step usually enables one to close wide defects without lateral incisions and without tension. Tillmanns emphasized the importance of this detachment of the soft palate from the edge of the palate bones, and James Berry considers this step one of the most important in the whole operation.

In thus dividing the palatine aponeurosis close to the hard palate margin, no muscle fibers are divided, no blood vessels and no nerves of importance are severed and it becomes possible to draw medialward the soft palate in almost its entire thickness. After detachment of the aponeurosis at the posterior border of the palate bones, it is comparatively easy to continue the separation of the oral mucous membrane of the soft palate forward over the hard palate by the use of an appropriate raspatory or periosteal elevator. One may begin by first elevating the mucoperiosteum from the hard palate and then dividing the aponeurotic attachment of the hard and soft palates by passing one scissors blade under the mucoperiosteum and the other in the

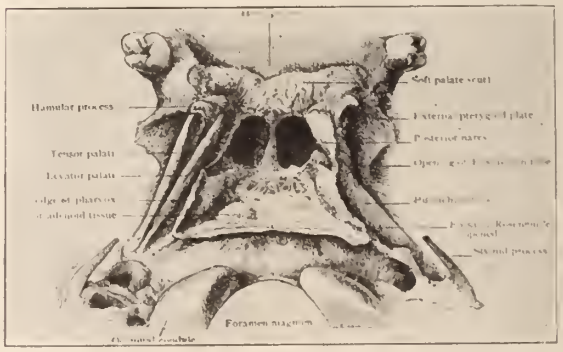

Fig. 4.—Division of tensor palati muscle at the hamular process ruins this muscle so far as its action in phonation is concerned. Division of its aponeurosis has no harmful effect. (Piersol.)

nasopharynx, and by closing the scissors, cut the aponeurosis and the nasal mucosa. This enables one to draw the halves of the soft palate together in their entire thickness and without mutilation. But since the raising of the mucoperiosteum from the hard palate is difficult in some cases, it may occasionally be better to split first the edge of the soft palate near the

edge of the palate bones, then divide the aponeurosis and continue the loosening of the flap through the split soft palate over onto the hard palate following a continuous plane of cleavage. By splitting the soft palate and loosening the oral layers with scissors one does less damage to vessels, nerves and muscles than one does when a knife is used. With the scissors it is a process of blunt dissection and relaxation during which

Fig. 5.—A, Ventrally displaced half of alveolar process drawn back into alignment with the wire loop; the wire tends to cut out and injure the tooth bulbs. B, Alveolar process drawn into alignment with malleable iron wire. Process protected by washer under perforated aluminum plate.

there may be no hemorrhage whatever. A raspatory is usually needed to elevate the mucoperiosteum of the hard palate. Ferguson's spade-like instrument with double elbow handle is very serviceable.

In wide palatal clefts the prospect of success without lateral incisions may not seem good. One may readily receive the impression that there is little or no palatal tissue to be freed and elevated by scissors-spreading dissection beginning at the edge of the cleft, the temptation to make lateral incisions in such a case being great. However, it may be said that soft palatal tissue is more abundant on the sides even though widely separated by the cleft than would be imagined by those who do not make it a practice to relax, infold and develop the lateral halves of the cleft palate by blunt dissection beginning at the cleft margins. The palatal tissue is there. It is our duty to free it, smooth it and thus broaden it. It certainly is not in the line of our duty to ruin its viability by severing its vessels in making lateral incisions.

Fig. 6.—Ends of twisted wire hanging out of mouth to prevent sticking of tongue and cheeks. Ends protected by perforated shot.

The difference between omitting lateral incisions and making them is the difference between pleasure and pain. If you make them liberally and cut muscles and blood vessels it will be your painful experience to see, in not a few instances, failure of union because of inadequate blood supply. There may be no infection, still the ischemic wound margins fall apart. If you omit the lateral incision it will be your pleasure as a rule to observe after you have finished the operation a mucosa red and viable. One does not often need to make a big incision. A small incision made in a line of tension is often of great service; then, too, a large lateral flap may be raised through an incision only big enough to admit the narrow

knife blade, the separation being accomplished by moving the blade pendulum-like, the point traversing a wide arc. As to the possibility of bringing the lateral flaps together, Mr. James Berry has said he would be grateful to any one who would bring him a case of cleft palate that could not be so corrected without long lateral incisions. We want all the blood available in any plastic flap anywhere.

A form of cleft palate by no means rare is that in which one-half of the alveolar process with the attached premaxillary process is situated ventrally to and quite out of alignment with the other half of the alveolar process. To draw the premaxillary process backward into alignment, one as a rule may place much confidence upon the repaired harelip in cases of combined harelip and cleft palate. The sustained pull or pressure of the tight lip gradually forces the protruding premaxillary process back into its normal position in many instances without the aid of surgical procedure of any kind. Occasionally, however, the premaxillary process can only be drawn into alignment through the aid of some surgical procedure or appliance. The use of a simple twisted wire loop is unsatisfactory because such an unprotected wire loop often cuts the tissues perhaps releasing itself and almost surely doing damage to the tooth bulbs. A better plan is to press the premaxilla back into alignment and hold it there by means of Brophy's leaden plate and silver wire device. If it is desirable to make the retaining device stronger this may be done by using malleable iron wire and aluminum plates with rubber washers as suggested by the writer. By using thick rubber pads or shoes under the aluminum plates the gums are protected and a constant elastic pressure is exerted. Malleable iron wire is much stronger than silver wire. The twisted ends of the wire if allowed to hang out of the corners of the mouth cannot injure the tongue. The ends may be further protected by perforated shot.

DISCUSSION

DR. B. P. WEAVER, Fort Wayne: The points brought out by Dr. Eastman concerning the conservation of the blood supply of the flaps in the surgical repair of cleft palate are certainly well taken and beautifully illustrated by the author, and while there can be no argument concerning the advisability of maintaining as high degree of vascularity here as in any other form of plastic work, yet we must remember that Lane in his masterful cleft palate work deliberately clamps the posterior palatine artery as it emerges from the posterior palatine foramen when he dissects up his flaps. Again, Helbing, modifying the Langenbeck method, operates in two stages, and in over 100 cases without infection. He has never found that it makes any difference if the palatine artery be injured, and whenever that accident has occurred he has never allowed it to interfere with the proper detachment of the flaps.

Those who may have been fortunate enough to have heard Dr. Eastman's paper in San Francisco and the discussion thereon will also remember the remarks of Dr. Sherman who declares that in the making of his flaps he not infrequently wittingly injures the vessels and yet has avoided postoperative sloughing in the big majority of cases. Although somewhat at a loss to understand the rationale of his results, yet Sherman is inclined to believe that the anastomosis between the ascending palatine coming up from the pharynx, with the nasopalatine branch in front, has sufficed for the nourishment of the flap. It seems to me that one of the most important points in the success or failure of this operation is the inhibition of muscular action consequent upon swallowing and crying, which comes from the palatal muscles. So that now, since it is never admissible, according to Blair, to divide the muscles of the soft palate, we must have recourse to other measures for putting them at rest. Chief among these in my estimation is the use of the nasal catheter as mentioned by Sherman in his discussion on Dr. Eastman's paper before mentioned. It is remarkable how easily a child can be taught to take its nourishment through a nasal catheter and how dexterous a careful nurse will soon become in such method of feeding.

So that finally to sum up, while it should be our endeavor always to preserve the descending palatine and as many of its branches as possible, yet if without a small lateral incision there appears too much traction at any point along the coaptation line, one should feel free to make such small lateral incisions well toward the alveolar border and lend his efforts toward as complete immobilization of the parts during the after care as is possible.

DR. DAVID ROSS, Indianapolis: Some years ago a young physician who thought that he was fitted to take up the work on the eye, appealed to an oculist for information as to how much work he should do to fit himself for it. The terse reply of the doctor was, "Know Gray's Anatomy." The young man said, "I want your honest opinion, I am not kidding." The older man said, "Neither am I kidding, and you have my honest opinion. Any man who successfully treats surgical or medical conditions must have an intimate knowledge of the whole anatomy so I recommend Gray's Anatomy."

I am glad to say that in these last few years surgeons are realizing that an intimate knowledge of anatomy is very essential to successful surgery, and many times their failures have been due to the fact that they thought all that

it was necessary to do was cut, regardless of what might follow, and not knowing what might follow. Even if successful in cutting, I know that surgeons often have failed in restoring a successful function to the part which was, after all, the real purpose of the operation.

Nothing could be more graphic in showing the importance of the anatomy of the part than the beautiful illustrations which Dr. Eastman has given us.

I have felt always in this work as elsewhere that there are two things which are very essential. The first is the preservation of the tissues, and the second, the preservation of the function. I do not believe we can emphasize too strongly the necessity, in whatever field we are working, of doing a gentle, skilful dissection. Many times success is absolutely precluded by an awkward, careless dissection of the tissues. We always should bear in mind that these tissues with which we are dealing are live, sensitive things and that they resent the harsh treatment they often get. Another very essential thing to be remembered is that we must have as little tension as possible and sometimes the two conditions interfere one with the other, but unknown to us until we found that it was a series of compromises between what we would do and what we could do. So one should not set down any hard and fast rule for a surgical procedure in any field. The individual surgeon must apply the rules for himself or he fails and the work will be a failure.

We have here in the cleft palate, it seems to me, two very distinct and clearly separated areas with which to deal, each of which will require and must get rather different consideration. We have a mucoperiosteum for the flap of the hard palate which it seems to me in the past has received altogether too much attention. I only wish to say that I think it has received attention of the profession beyond its due because it is to a large extent a feasible factor in the result, if you are careful to give the proper relaxation to the flaps in the coaptation. We have in this mucoperiosteum a tissue that does not stand tension or pressure, and many failures have been due to undue pressure as well as to the injury to the anatomy of the part itself. I would hesitate to assume to put my judgment in these cases against men who have had far wider experience and were doing successful operations on these things before I was even born into the profession of surgery, but I do not believe that the flaps or stitches or bands or anything else that has not to do with overcoming of tension of the mucoperiosteum of the hard palate are worth their room. I think they are positive injury. You have in the soft palate the muscle to which our attention has been called, and in which the greater danger of non-union lies. Let us try not to sever a muscle, whatever method of procedure we choose, that would affect the function of that muscle, but remember that tension must be relieved or you are going to get separation. Every time the child cries, every time the child distends, there is more or less tension placed on the muscles, and it is bound to be more or less spasmodic. It is easy to get a separation of the tissues and shortly the palate falls forward and the object of the operation is lost.

Dr. J. H. Oliver, Indianapolis: My good friend Dr. Eastman says that for two years he made lateral incisions and toward the end of that time he was a little perturbed over his lack of success in cleft palate operations. The only cases of sloughing I have had have been in cases where I have not used the lateral incisions. The palate would invariably fall forward and I would have to go back over my work and carefully place in the lateral incisions. The bad features of the lateral incision were brought out by Dr. Eastman, but it strikes me that his argument is absolutely unsurgical, though beautifully explained. I simply cannot get it through my head how we are going to control the palate if we don't get some use of these extending fibers. I make a small incision and separate the palate both ways and then I put in my stitches, pulling my flaps over and cutting where the tension is the greatest, even if I skip over a little distance and cut before and behind.

I believe the doctor really must be mistaken in his per cent. of perfect operations when he says that not more than one in twelve is successful. I have been doing cleft palate operations by the lateral incision method for twenty-five years and I know I can beat that. He advocates the use of scissors in his operation and yet we all know that a scissors cut will not heal as quickly as a clean, sharp knife cut. If you have not tried it you will be surprised in these high arched palates, and even in the low for that matter, that it is almost impossible to keep the palate up without the lateral incisions. After the patient comes out from the anesthetic the flaps begin to produce tension and very frequently the stitches break.

Feeding with the catheter is splendid. You will be surprised how readily the child will form the catheter habit of feeding. I don't believe the child should be allowed to swallow until after two or three days if you can keep it from it. I recommend feeding with the catheter if the child can stand it without bawling his head off. But if he begins to cry I drop all idea of the catheter and let nature take care of it herself.

When I first tried operating without the lateral incisions and met with such poor results I believed it surely must be that my technic was defective, and about that time a surgeon friend came down from a distant city and did the same operation for me. On the fourth day his cleft was worse than mine, and I said possibly my technic was not altogether to blame. Dr.

Eastman's paper is timely and I have enjoyed it very much but really I think in the course of another year or two he will go back to making lateral incisions.

DR. H. H. BONN, Indianapolis: In defense of all that Dr. Eastman has said I wish to say that I have had the honor of being associated with Dr. Eastman for about six or seven years and in accord with the old adage, "Seeing is believing," I have seen cleft palates operated on in this way for several years and you who are skeptical will soon have all doubts removed if you will come down to the operating room and see the ease with which these cases are handled. You will be surprised at the ease with which one of these flaps can be lifted over. We have thirteen operated cases of cleft palate in the house to-day and ten out of the thirteen are perfect. Can you imagine a boy who next day after operation goes out into the hall and smokes and hawks and spits when operated with the lateral incision, and who would get a complete union. Without these lateral incisions, I have seen complete union time and again.

DR. EASTMAN, closing: I am sure that Dr. Oliver quite misunderstood me if he thought for a moment that I was referring to the percentage of his cures with the lateral incision, or any one's else but my own. I don't wish to imply that the men who make lateral incisions fail in a large percentage of cases they operate. What I wished to say was that I had failed in the large percentage of cases that I operated when using the lateral incision. When I said that I did not think more than one in a dozen would heal properly you will recall that I had a picture on the screen of the old Langenbeck method. It was that kind of an incision which I thought would fail eleven times out of twelve. By the Langenbeck method the flap is absolutely devascularized and the flap cannot possibly heal. I feel really sure that Dr. Oliver misunderstood me if he thought for a moment I wished to convey the thought that his results had not always been excellent, for knowing him as his pupil and colleague, as I do, I am fully convinced he operates with success.

As to Mr. Lane's operations, I wish to speak briefly of a scene which I witnessed last summer in London. Mr. Lane had spoken of his turnover flap operation which I showed on the screen a few moments ago, in which the flap is turned over leaving one long side. In 1907 I spent some time in observing Mr. Lane's work and although as a surgical executant Mr. Lane is a wizard, I must say that I was not impressed with his cleft palate surgery. With his method he never could restore the natural anatomical conditions. These palates operated by median suture do not reveal that they have been operated at all. At the time of the scene which I was about to mention, during the London Clinical Congress of Surgeons, Mr. Lane stood upon the platform and gave an account of his work, enumerating his successes. Immediately after him, Mr. Berry addressed the audience, saying, "I know that Mr. Lane will correct me if I am wrong when I say that whereas, the rest of us in our meetings in London have presented our cases so that our spectators may see the actual results of our operations, we have never been successful in interesting Mr. Lane at one of our meetings to bring a single case so we might see with what results he operates." Mr. Lane made no reply, and in the informal meeting following, the London men generally expressed their approval of the remarks of Mr. Berry. I feel sure that Mr. Berry comes of the type of men who is the safer one to follow.

As to making lateral incisions, I don't wish to be understood as giving positive opinions on this subject, but I merely wish to tell the story of my experience and that is all. I have operated some 78 cleft palates; that is not a large series. In my experience, compared with that of other men, and which is not as great as that of the other men, I observe this important principle, that there must be no tension upon the sutures whatever. I tried to perfect my technic, using lateral incisions, but I had a most trying and discouraging experience. A number of them fell down, such a large per cent. in fact that I felt it would be useless for me to continue making cleft palate operations at all. Frequently we only had two rather narrow, short, string-like flaps that were ischemic, and without blood we cannot hope for the wound to heal; there is no hope for them to unite and be strong. When I began the median suture operation without lateral incisions I was amazed at the ease with which the flaps could be drawn up. Besides the edges of the flaps will be red and you can tell by looking at it that it is going to unite. You can be sure of a better result with the median suture than you can after the lateral incision is made. Dr. Oliver says that after my experience is more extensive I will change my view and go back to lateral incisions. I will if my results are not sufficiently successful. I do not say that I will not change my mind. But I have tried the operation both ways and I feel that it has been one of the greatest pleasures of my life to discover how nicely I can deal with cleft palates as compared with my success when using lateral incisions. The improvement is so great that I don't believe I will ever go back to the old plan of making lateral incisions. To lift flaps through a preliminary lateral incision I believe is a mistake. It is in defiance of our elementary surgical principles to deliberately cut off the blood supply from a flap or whatever field we are working in and I believe the gentlemen who try this will find that the omission of the lateral incision and the employment of mattress sutures are the important keys to success in cleft palate surgery.

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EDITORIALS

ARTERIOSCLEROSIS AND KIDNEY DISEASE

These two diseases are respected by the laity as well as by medical men. "Hardening of the arteries" is a phrase with which the laity is very familiar, and to their mind it represents a condition that is quite serious. Toxic substances, some of which are known and some of which are not, are believed to be the causative factors in producing this pathological change.

The localization of the "hardening" is a matter of very great clinical and pathological importance. The brunt of the sclerosis may be in the ascending arch of the aorta where it forms the clinical picture of what is regarded as syphilitic aortitis; it may be in the coronary arteries, causing angina pectoris; it may be in the cerebral vessels, giving rise to the symptoms of cerebral arteriosclerosis; it may be in the vessels of the kidney, producing an arteriosclerotic nephritis; it may be generalized, or it may be localized more particularly in any part of the body.

The involvement of the kidney in the course of arteriosclerosis obviously must vary in different cases, and the extent to which this may vary the symptomatology will vary. In a case with slight kidney changes there may be no clinical manifestations pointing to renal disease, for much of the renal tissue may be destroyed without renal function being seriously impaired. On the other hand, in a case with marked kidney changes the symptoms of renal insufficiency may be quite pronounced, but there should be no mistake in such cases in recognizing that these symptoms are due to the changes in the kidney that follow as the result of a general arteriosclerotic process.

Since the clinical course of cases of that type is somewhat different from those in which the primary pathological change is in the kidney, the differential diagnosis is often not difficult. The physical condition of the arteries throughout the system tells the story. The radial, brachial, and temporal arteries often show in an unmistakable way what the disease is. Changes in the retinal vessels are of great significance and of the utmost value as an aid in the diagnosis. Arterial hypertension as a symptom is found in proportion to the extent of kidney involvement. Associated with the sclerotic changes in the arteries are found the secondary cardiac changes, such as hypertrophy and dilatation of the heart, relative insufficiencies, and so on. These cardiovascular changes constitute a more or less definite clinical picture which is usually quite easily recognized.

In chronic nephritis, or Bright's disease, the kidney is the starting place of the degenerative process. Sooner or later in the course of the disease secondary degenerative changes in the cardiovascular system also follow. In this condition arterial hypertension is a constant and diagnostic symptom. Increased blood pressure is practically conclusive evidence of the presence of chronic nephritis. Certain changes in the retinal vessels known as "albuminuric retinitis" may be found even early in the disease, and when found are of diagnostic value. Polyuria, nycturia, changes in the urine, such as low specific gravity, albuminuria, cylindruria, and a lowered phthalein excretion in the urine are quite constant findings. Dyspnea, edema, headache, and so on, often come on in the more advanced stages. When involvement of the circulatory system has reached a sufficient degree the resultant cardiorenal symptomatology can also be recognized quite easily.

In disease processes in which more than one system is involved it is necessary to form a clear conception of the sequence of pathological changes, for only then can a rational system of therapy be instituted. Certainly this is true of arteriosclerosis and kidney disease. The general interest taken in these types of disease is shown by the great number of articles accumulating in the literature in which these subjects are discussed. There is always something new that we can learn about them.

SYPHILIS TO THE THIRD GENERATION

Dr. William Allen Pusey in his new book Syphilis as a Modern Problem says: "For manifest reasons it has been expected that syphilis might be transmitted to the third generation, and possibly further, and from the earliest days of syphilis this question has been one of constant interest and observation." Theoretically, of course, the transmission to the

third generation is a possibility. Equally possible, theoretically, is it that if syphilis can be transmitted to the third generation, it can be transmitted to the fourth, and so on. As a matter of fact, however, transmission to the third generation is still an undetermined possibility. Authorities of such wide experience and acute observation as Fournier and Hutchinson disagree on this subject. Fournier has produced a number of cases in which he thinks transmission to the third generation is probably established. Hutchinson, with his enormous experience, at one time believed it possible, but in the end was unable to find any case within his experience so free from the possibility of error in the facts as to convince him of its occurrence. R. W. Taylor may be cited also as an authority who, after giving life-long attention to the subject, was in the end a disbeliever in its occurrence. In view of the alertness with which the transmission to the third generation has been watched for, and the extreme rarity of even plausible cases supporting the fact, it must be said that if it ever occurs it occurs with unexampled rarity; such rarity as to make it entirely negligible.

The failure of hereditary syphilis to be transmitted to the third generation indicates that having had hereditary syphilis is not in itself a bar to marriage. Patients who have distinct stigmata of hereditary syphilis often belong to the class of the physically unfit, and as such, from the standpoint of society, are not suitable persons to bear children; but this is on account of their general physical defectiveness, and not because they are likely to transmit syphilis.

"MAY WE COUNT ON YOUR ASSISTANCE?"

In the Propaganda Department of *The Journal of the American Medical Association* for November 13, is reprinted an editorial on advertising copied from the *New York State Journal of Medicine*. The conclusion is couched in strong language—but not a whit too strong:

"When an exploiter places on the market a nostrum of no intrinsic value (excepting the bottle and cork) for which he claims virtues which it does not possess . . . he robs the purchaser of his money and health, thereby becoming a thief of the most despicable order. Any medical journal printing the fraudulent claims contained in the advertisements of the nostrums condemned by the Council on Pharmacy and Chemistry is an accessory to this act of thievery and the subscriber to such journals voluntarily assumes the position of an accomplice."

"An appreciation of the subscriber's responsibility, emphasized in the editorial just quoted, may have prompted a Brooklyn physician to write us," says *The Journal,* editorially, in the same issue, " 'Cast your eye over the enclosed advertisements [from the *Therapeutic Gazette*] and then wonder at the nerve in asking subscriptions from the profession.' Almost the same mail brought us, from another New York physician, a similar protest accompanied by advertisements from the New York *Medical Record,* these differing from those in the *Therapeutic Gazette* in degree but not in kind. Still another New York physician sent a collection of advertisements from the *New York Medical Journal.* Some of the advertisements sent us are of the rankest frauds, neither better nor worse than the fraudulent 'patent medicine' advertisements appearing in lay periodicals—in fact, some are of 'patent medicines' which many of the better lay magazines will not admit to their advertising pages. We hope that our correspondents have expressed their views on the subject to the publishers of the respective journals; nothing will so speedily bring about reform as determined and practical protest from the profession. One of the advertisements enclosed by a correspondent is pertinent here: 'May we count on your assistance?' ingenuously inquires the Berlin Laboratory, Ltd., and with cool effrontery continues: 'We are telling the layman about Intesti-Fermin. . . . May we count on your assistance in spreading this message to everyone . . . ?' Now who and what, doctor, may 'count on your assistance?' Is it the quack and the nostrum manufacturer? Do you want to be an accomplice in what the *New York State Journal of Medicine* terms an 'act of thievery'? Do you wish to assist in the promotion of Bell-Ans, Sal Hepatica, Campho-Phenique, Angier's Emulsion, Bromidia, Tongaline, Sanatogen, Sanmetto, Kutnow's Powder, Phenalgin, Micajah's Wafers, Ammonol, Chionia, Formamint, Anedemin, Neurosine, Pasadyne, etc.? If so—lend your support to the medical journals that advertise them. If, however, it is the public—your own patients—that may 'count on your assistance,' then your course is equally clear; refuse to accept from the mail, subscribe for, contribute to, or in any way countenance the journals that help to keep alive quackery and fraud—and *let the publishers know why!* The result will soon be evident. Do not, however, stop with this negative measure; it is equally important to sustain those journals which, without the backing of

professional organization, have cleaned up their advertising pages and freed themselves from the blighting influence of the nostrum evil. If, through inertia and inattention, you permit your mail box and library table to become littered with the unclean swarm of nostrum-purveying journals, clean house. Then help support as many as you can afford of the unofficial publications that are making a creditable stand for decency in advertising. If the medical profession as a whole will manifest its opinion and desires in an unmistakable and practical way, an uplift in medical journalism will speedily be accomplished. Then and not till then can we consistently appeal to lay magazines and newspapers to stop promoting frauds in their advertising pages."

VENARSEN TREATMENT OF SYPHILIS

Probably every doctor in Indiana has received a circular letter concerning the intravenous method of administering medicine, (a form of treatment not even reasonably free from danger) and in particular concerning the intravenous use of "venarsen," which, it is reported, has been used successfully in the treatment of syphilis for the past two years. Concerning this remedy the manufacturers say: "We do not claim that venarsen is a sure cure, but we do claim that we have received a larger percent of negatives from its use than from any other arsenical compound on the market."

Inasmuch as we have had some inquiries concerning the therapeutic value of "venarsen," we desire to refer our readers to the report of the Council on Pharmacy and Chemistry on "venarsen," which appeared in *The Journal of the American Medical Association* of May 22, 1915. Without printing the article in full it is sufficient to say that the Council found that "venarsen" as now marketed is a simple solution containing approximately 9 grains of sodium cacodylate, 1/40 grain of mercury biniodide, and 3/4 grain of sodium iodide to each full dose. It is quite possible that physicians have used the preparation under the misapprehension that it is analogous to salvarsan.

As to the therapeutic claims, the preparation is said to be effective and safe in syphilis. However, no real evidence is presented. Sodium cacodylate has been tried as an anti-syphilitic, but with indifferent success. Certainly the results have not been comparable to those of salvarsan. The mercury could conceivably enhance its effect, but the dosage appears too small and the course too short for this influence to be pronounced. Finally, to summarize, *The Journal of the American Medical Association* says:

"Venarsen" treatment consists essentially in the intravenous injection of large doses of sodium cacodylate. The other ingredients, as well as the name, merely constitute so much mystification. While the cacodylate probably has some effect upon the conditions for which it is advised there is no evidence that its value even approaches that of salvarsan in syphilis, or that the intravenous use is preferable to the ordinary methods. The dangers are manifest, although they may not be so great as with salvarsan. . . . Physicians who wish to try intravenous cacodylate administration should have a full realization of the dangers of such treatment, and in order to avoid further risks, will do well to refrain from combining other drugs with the cacodylate in fixed proportions."

THE DOCTOR'S SAVINGS

It is reported that within fifteen years an Indianapolis spectacle pedler, by the name of Allard, accumulated a fortune of $157,000. Of course this does not mean that such a large sum of money was accumulated directly from the sale of spectacles, but it does mean that the invested profits in real estate and stocks and bonds resulted in the accumulation of a small fortune. Aside from the fact that the ordinary spectacle vender swindles the public by selling spectacles of poor quality and not adapted to the proper correction of refractive errors, the experience of this spectacle vender is a lesson which should be taken to heart by many people who probably actually make ten or a hundred times more than the spectacle vender made from the sale of his glasses, and yet at the end of fifteen years have nothing to show from their earnings. Doctors are as indifferent to the saving plan as any other class of people, and the well-known record of the average physician who, after a long and useful professional life, dies without leaving any property of consequence for his family, is testimony of the doctor's careless methods in collecting what is his due and in saving anything out of what he does collect.

There is an old saying that it is not what a man makes but what he saves which counts in accumulating a competence. It is possible for every doctor having a fair practice to accumulate a small fortune during his lifetime if he has the sagacity to conduct his professional

work in a business-like way, and to save a reasonable amount from his income and invest it in real estate, or equally safe property, from which a return can be secured. Money invested in all kinds of promotion schemes, including mines and the majority of the industrial enterprises, is very apt to be badly invested. Where one is successful, five hundred are failures. The professional man seldom, if ever, has either time or ability to judge as to the character of any of these questionable enterprises. Therefore, when he makes an investment it should be one that is safe, and there is nothing safer than well-located real estate or mortgages upon real estate. The Editor of THE JOURNAL confesses that he has been just as foolish as the average medical man, and with both chagrin and sadness looks back upon some investments in promotion schemes that have left him a poorer but wiser man. His only real savings are those that have been in real estate or its equivalent, and accordingly he feels disposed to follow and recommend the advice given by a celebrated financier to a class of young men about to leave college, "Young men, make it an undeviating rule to save something from each year's income, no matter how small your income may be; and invest your savings where at least they will be safe, even if they do not bring you good return in interest and in increased value of the investment. There is nothing safer and better as an investment than real estate, and in particular good farm property. Buy good and well-located farms or good centrally located real estate in thriving towns or cities, or buy mortgages upon such property with your savings and you will never want in your old age."

EDITORIAL NOTES

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

HAVE you paid your medical society dues? If not, why not?

THE JOURNAL extends to all its readers the compliments of the Season—a Merry Christmas and a Happy New Year.

THIS number of THE JOURNAL contains the index for the year. If you bind your Journals, be sure that the printer makes use of the index.

THE prevailing scarcity of salvarsan and neosalvarsan finally has brought about a protest from the State Department to the allies who are preventing shipments from Germany. It is reported that the protests have resulted in favorable action and that in the near future large quantities of salvarsan and neosalvarsan will reach this country. It is quite probable that other chemicals and pharmaceuticals of German manufacture, needed and used by the medical profession, also will be permitted to pass the blockade.

THE state secretary has a supply of the model constitution and by-laws recommended by the American Medical Association for county societies. An investigation would probably disclose the startling fact in many counties that there was no existing copy of the local constitution and by-laws, or if so, it would be found in the front part of the secretary's record book quite out of date by this time. If this is the case in your county, you should write for a copy of this pamphlet and amend your existing laws to make them conform to the established standard.

OWING to the wide discussion given the public drinking cup, this evil has become a rarity, a fact worthy of great commendation. However, a wise physician has observed that the public cigar-cutter is a greater evil. He says, "One has only to stand in a cigar store for a few minutes when he will notice a man buy a cigar, roll it around in his mouth, and put the end—possibly with saliva dripping from it—into the public cutter, and clip it off. This is repeated many times, and the cutter must get covered with germs—much more so than the drinking cup which can be rinsed."

Down with the public cigar-cutter!

SECRETARIES are requested to bear in mind that the fiscal year of the State Association closes at midnight December 31, 1915, and that it is absolutely impossible for any dues for the year 1915 to be received after that date. Of course, it is very unlikely that any belated physician would care to pay his dues for an entire year when his benefits would cover only a few days. It occasionally happens that physicians contemplate moving to another state and wish to show that they have been members of the Indiana State Medical Association for as far back as possible, and they are willing in order to gain their purpose to pay back dues. Such action is entirely out of order and the county secretaries will save time by making this explanation to the member before he pays his money.

In a recent number of The Journal we called attention to the effort put forth by some insurance agents to secure business by misrepresentation, and especially by misrepresentations concerning competitors. Our attention again is called to this "knocking" tendency through a circular issued by the Physicians' Casualty Association of America,—now advertising in The Journal—in which it is reported that unscrupulous agents are attempting to secure business by "running down" said association; all of which leads us to reiterate what we have stated before, that doctors will be wise if they refuse to give an audience to, and especially refuse to give any business to an agent that attempts to gain business by tearing down his competitors. What he has to sell should sell on its own merits.

Some time ago, *The Journal of the American Medical Association* warned physicians concerning the scheme being worked on the medical profession under the name of The Medical Index Association, being conducted by a C. A. Beck. Following complaints from Indianapolis and New Orleans, where the concern had opened offices, and fleeced many unsuspecting doctors out of subscriptions at ten dollars "per," the "Dr. Beck" began operations in Detroit, where alas and alack he was doomed to meet his Waterloo. A wideawake doctor in that city, remembering the timely warning of *The Journal of the American Medical Association,* wired for particulars, and, following *The Journal's* reply, saw that "Dr. Beck" was arrested with proper celerity. All of which only goes to show that the long-suffering doctor is not always an "easy mark."

If any of the members of the Association are in doubt as to the value of the medical defense provided by the Association to members in good standing, they should write to the Medical Defense Committee and learn the particulars concerning malpractice suits that have been defended successfully by the Association. The record of the Defense Committee is an enviable one, and let no member of the Association minimize the value of the medical defense feature, for there is no telling how soon he may need such defense, and he can rest assured that it will prove of value to him. But members should remember that in order to avail themselves of this medical defense it is necessary to be in good standing in the Association, and that means keeping the dues paid up. Delinquency occurs on February 1.

This is the time of year when diphtheria begins to be prevalent, and perhaps it is not out of place to remind our readers that diphtheria antitoxin, now recognized as a specific in the treatment of diphtheria, should be selected with some care. It should be a product of established purity and potency, and one that is backed by experience, scientific knowledge, and adequate manufacturing equipment. There are several large manufacturing concerns, several of which advertise in The Journal, that make a specialty of biologic products, and they deserve first consideration when it comes to the selection of the best possible antitoxin. The little "one-horse" concerns, having little or no experience, and few facilities for the manufacture of biologic products, should be patronized with extreme caution when a remedy like antitoxin is to be purchased.

The Journal of the American Medical Association calls attention to the various schemes that are offered for purchasing automobile supplies at cost, and to the fact that most of these schemes border on the fraudulent. The latest to turn up is the Automobile-Owners' Service Association, of Toledo, and a certain T. A. Buck is soliciting physicians for membership at $10.00 each. Physicians are the principal class solicited. As is stated by the *Journal of the American Medical Association,* "There are reliable concerns that furnish automobile supplies on favorable terms, but these, as a rule, do not have traveling men selling certificates of membership for cash. In any event, if contracts are to be entered into let the company send the bill in the regular way. This will give time for investigation and cool thinking after the smooth-talking representative has disappeared, which is far better than doing the cool thinking after the cash has disappeared." This is in line with what we have preached always, *never pay money to agents.*

Members of the Association should endeavor to cooperate with the county secretary in the matter of payment of the annual dues. The county secretary is a practicing physician quite as busy as any of the other members and has no time to be continually dunning delinquents. The dues have to be paid some time during the year and in view of the malpractice defense, there is every reason for paying promptly and early in the year.

Every member should take pride in having the affairs of this organization conducted in the most approved business-like way. The secre-

taries are furnished with receipt books, numbered in triplicate, and it is the duty of the secretary to issue this official receipt whenever the dues are paid, giving the member the triplicate receipt. On the other hand, it is the duty of the member to insist upon having his dues properly receipted when he pays them. A conscientious regard for these instructions will keep all accounts straight and obviate any occasion for controversy.

WE desire to call attention to a book entitled "Regulation of the Practice of Medicine" compiled by the Medicolegal Bureau of the American Medical Association. It is the only complete compend in print on the regulation of the practice of medicine, and it includes:

1. A list of all Supreme Court decisions, both State and Federal, on this subject, arranged chronologically by states, with reference to the Court Reports in which each decision may be found. This list alone, to the State Board Secretary or prosecuting attorney, is worth many times the price of the book.
2. Abstracts of 267 of the most important decisions, arranged chronologically by states.
3. A digest of the subject, considered topically with copious references to ruling cases under each head.
4. An analytical index, giving references to appropriate sections on each topic.

This book will be found useful to a large number of medical men. It is bound in legal buckram with stamped leather labels, contains 504 pages, and is sold for $6.00, postage prepaid, by the American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

How many cases of pulmonary tuberculosis are actually reported to the local health boards in compliance with the law now in force on the subject? Judging from the data in certain counties, it is doubtful whether the law is accomplishing what it attempted. In the first place a physician is not always sure of his diagnosis in incipient cases, and when it comes to reporting the same, gives the patient the benefit of the doubt. Again, many of these farther advanced cases have been the rounds of the physicians, and it is supposed that some other physician has reported the case. There are instances of doctors having scruples against reporting tuberculosis, as it is not an impossible task to secure from county and city records lists of these tuberculosis patients, which could be used to decided advantage by patent medicine manufacturers for selling consumption cures. It is an actual fact that in some states these lists have been offered for sale by clerks of health boards, and it is a very alluring form of graft.

AN Illinois physician is responsible for the statement that at the close of the first year's operation of the Compensation Act, malpractice suits against physicians had increased 100 per cent. His explanation was that formerly certain disreputable lawyers were in the habit of soliciting business from employees who had been injured, on contingent fees. The offer was attractive, as the lawyer usually stated that suit would be brought for five or ten thousand dollars or some other very large figure. Now that the compensation for injuries is established by law and is payable without the service of an attorney, these same shysters are turning their attention to the doctors. That is, since they cannot prey upon the employers, they prey upon the doctors, and allege that the doctors are not taking care of these injury cases properly. All this leads us to consider whether or not the Compensation Act in Indiana will have the same effect; and if so, we should prepare for this by having all the reputable physicians in Indiana, members of the State Association, standing together as a unit against such threats.

ONE of our correspondents inquires about the efforts on the part of the State Board of Pharmacy to get a ruling on the Harrison Anti-Narcotic Law which will prevent physicians from dispensing narcotics of any description. The contention is that the word "administer," as found in the law, has a distinct and separate meaning from the word dispensing. However, we are advised that this point has been ruled on and that there is nothing in the Anti-Narcotic Law which can be construed as preventing physicians from dispensing narcotics when, in the judgment of the physician, it becomes necessary. But this action on the part of the Board of Pharmacy is in keeping with what we have known for a long time, and that is that the pharmacists desire to prevent physicians from dispensing even a single dose of medicine, and they will make every effort to bring about such a condition as they desire. Incidentally, it may be well to remind the pharmacists that they are "playing with fire," for it is quite within the reach of possibility as well as probability that retribution may be the penalty for the unfairness contemplated.

AT the close of this fiscal year every county secretary who has served for this year will receive from the councilor of his district a small

blank on which to enter the report of the activities of his county. Secretaries retiring from office at the close of this year are expected to attend to this report, as the new secretary will have his own report for the next year. The item, "Number of paid up members for 1915" will be filled out from the state secretary's office and if any discrepancies are discovered between that number and your own records, please report the same. The next item is "Number of non-members eligible to membership." Please be careful not to give the total professional population in your county as was done last year by the Porter County secretary. This list was published in *The Journal* as sent in by the secretary, and such a large number of eligible non-members was naturally not complimentary to the county. There should be 3,000 members of the Indiana State Medical Association, and what we want to know is where to look for that other 400 for 1916. Dr. Fair, the very efficient secretary of the Delaware County Society, was entirely too conscientious last year in entering the number of scientific papers presented, as he did not give his society credit for a number of addresses which were delivered before the members. Under this item, "Scientific Papers," include all addresses, on whatever subject, as well as papers on strictly scientific topics.

Concerning the question of medical fees for cases coming under the provisions of the Indiana Workmen's Compensation Act, and the effort on the part of insurance companies to get physicians to sign agreements to render services for ridiculously low fees, it may not be out of place to refer to the conditions existing in Illinois where it is said that malpractice suits are on the increase because shyster lawyers now are prosecuting doctors rather than employers when laborers seemingly do not secure good results from treatment of injuries. It is said that the charge has been made in Illinois that doctors do not give these injury cases the services required, and that the reason for this is that medical men accept this work at such ridiculously low fees that there is a tendency to slight the cases because not adequately paid for the services rendered. We might put it another way and say that for the most part the services rendered are not up to standard because the better class of physicians will not have anything to do with such a schedule of fees as the average insurance company offers for the care of injury cases which come under the Compensation Acts. But the point is, the physician who undertakes to care for these injury cases is assuming more risk since he is becoming the target for shyster lawyers, and, while we believe that whenever a doctor accepts a case he is in duty bound to give it his best service, no matter what the compensation may be, yet if he is going to accept contract practice he should insist that the fees are in keeping with the fees to which he is accustomed for private work.

The time is coming when the doctor who prescribes preparations, the exact nature and action of which is unknown to him, will be pointed to as a dangerous man by the laity. In other words, the public is beginning to realize that in the interest of safety as well as scientific honesty there is no excuse for the prescribing of a remedy of secret composition and unknown action. In this connection *The Journal of the American Medical Association* calls attention to an editorial in one of the New York newspapers in which the readers are warned of the fallacy if not the danger of accepting prescriptions from physicians who, too indolent or unscientific to think out their own prescriptions, write for preparations the composition of which they either do not know at all, or accept from the manufacturers. A well merited criticism is offered when the same newspaper condemns the practice of medical journals that advertise these preparations. As *The Journal of the American Medical Association* well says, "When the average layman wakes up to the fact that his doctor is prescribing a 'patent medicine'—for the average layman will not be able to distinguish between many of the so-called 'ethical proprietaries' and the common every-day 'patent medicine' any more than we are able to do so—he will either go to a doctor who will give him the benefit of scientific training and individual thought, or he will go to the druggist and purchase his own medicine and read for himself what the manufacturer has to say regarding it."

We all are more or less susceptible to flattery, and sometimes it is a little difficult to know just how much sincerity is to be attached to compliments. Early in November we received a letter from an advertising agent in which we were told that the advertising was placed in The Journal because of its exceptional excellence as compared to many other journals in which the advertising would *not* be placed. There were several other compliments which rather pleased us, but we confess that we had a sneaking suspicion that the letter was a "form letter" which had been sent to several periodicals. Sure enough, our surmise proved correct, for almost an exact duplicate of the letter received by us

has been published in some of the other state journals, notably *The Journal of the Michigan State Medical Society*. We are not saying that the compliment paid the Michigan journal is not deserved, for we think it is, but the fact remains that compliments are often given when there is something to be gained by the giving. Incidentally, the letter to which we refer calls attention to the fact that advertising in a medical journal is a component part of THE JOURNAL, and should be something more than a billboard. We are quite in sympathy with the plea made for more cooperation on the part of medical men in making the advertiser feel that he really has been of some benefit to the profession, and if his wares have merit he deserves favorable consideration. To all of which we cheerfully subscribe.

"TANLAC" is the name of a new proprietary medicine which is being advertised widely in Indiana newspapers. Aside from the fact that the newspapers have assisted the sale of this nostrum by permitting clever advertising concerning it to appear as regular reading matter, the promoters have used liberal advertising space in printing testimonials which, if they could be believed, stamp this new remedy as being the greatest life-saver ever produced. Among the recommendations that have appeared in glaring headlines is one reported to be from the Reverend E. T. Miles, pastor of the Methodist Episcopal Church of West Terre Haute. The testimony is extravagant in its praise of "Tanlac," and the promoters take occasion to say that "Rev. Miles is a man of unquestioned honesty and integrity, and a man, who, under no circumstances, would be persuaded to exaggerate a statement of any kind." To our notion, any minister of the Gospel who recommends a nostrum such as "Tanlac" should not be considered a man of good mental balance, nor should he be considered a man of unquestioned honesty and integrity; for every minister, if he possesses the requisite amount of intelligence to be a minister, knows that proprietary medicines of unknown composition are usually frauds of the worst type, and were it not for the extravagant advertising which newspapers give them, and the recommendations such as the Rev. Miles gives them, they would not last five minutes. Whenever a swindler desires to secure a particularly effective recommendation he hies himself to the clergy, and it is exceedingly unfortunate that ministers of the Gospel should be "taken in" so easily. The reverend gentleman from Terre Haute who lends his name and official position to the promotion of a nostrum like "Tanlac" should turn over a new leaf if he expects to have the respect of a goodly portion of the public and lessen the feeling among some of us that an action like his, if he is possessed with the intelligence which his position credits him with having, must be due to some kind of profit, direct or indirect, which is being received for the use of his name.

DEATHS

L. F. BALL, M.D., of Prairieton, died November 1, aged 87 years.

L. R. BROADWELL, M.D., died November 5 at his home in Velpen, aged 81 years.

JOHN H. HAMMOND, M.D., of Anderson, retired, died November 12, aged 55 years.

SUE P. WILLAN, wife of Dr. R. D. Willan, of Trafalgar, died November 3, aged 65 years.

MRS. IDA SAUNDERS, wife of Dr. J. E. Saunders, of Grass Creek, died November 17.

ANNA TURBY BADER, wife of Dr. Samuel D. Bader, of near Peabody, died November 4, aged 62 years.

SOLOMON H. SECOY, M.D., pioneer physician of Jeffersonville, died October 31, at the home of his daughter, aged 74 years.

WILLIAM F. HANI, M.D., aged 72 years, died at the State Soldiers' Home, and was buried at Middlebury, his former home.

BEATRICE DRUMMOND, wife of Dr. John Drummond, of Indiana Harbor, died November 7, at St. Margaret's hospital, aged 23 years. Death was due to tuberculosis of the bowels.

TIFFIN J. SHACKELFORD, M.D., prominent physician of Warsaw, died November 17, from apoplexy. Dr. Shackelford located at Warsaw in 1883 where he built up a large practice. He took an active interest in the civic affairs of the city, served on the city and county boards of health, was president of the county medical association, and held the same office in the Thirteenth District Medical Society. He was 60 years of age.

Owen Stoddard, M.D., aged 72 years, practicing physician at Merom, Sullivan County, for thirty years, but for the last ten years retired, died November 10, death due to mitral stenosis and aortic insufficiency. He was a student of Rush Medical College and a graduate of the Indiana Medical College in 1886. He was always closely identified with educational, reform and public improvement enterprises, and an active member of the county and state medical societies.

J. F. Brendel, M.D., of Zionsville, prominent physician of Boone County, died November 4, death being due to arteriosclerosis. Dr. Brendel was born in Hamilton County, August 9, 1853. In 1881 he went to Nebraska where he studied medicine with his brother. In 1892 he graduated from the Indiana Physio Medical College, and for many years has practiced medicine in Boone County. Of late years his son, Dr. O. E. Brendel, has been associated with him in his practice. He was a member of the Indiana State Medical Association.

Samuel Newell Hamilton, M.D., of Connersville, died November 18 from heart trouble, having been in failing health for more than a year. Dr. Hamilton was born near Orange, in 1845, served in the Civil War, graduated from the Indiana Medical College in 1875, spent two years in Texas, and returning to Indiana established a practice in Fayette County, residing at Everton. In 1882 he located at Connersville where he has since resided. Dr. Hamilton was prominent in medical circles, being a member of the state association as well as the national. For fifteen years he was physician for the C. H. & D. railroad, was medical director of the department of Indiana in the Federal Association, and at one time occupied the position of G. A. R. medical inspector of Indiana. He was 69 years of age.

Christian B. Stemen, M.D., Fort Wayne, died November 13, at the family home following a short illness. Dr. Stemen was born in Fairfield County, Ohio, December 3, 1836, he taught school, and in 1860 entered the Eclectic Medical Institute of Cincinnati, from which he graduated in 1864. Later in life he received his A. M. degree from Baldwin University, Berea, Ohio. In 1875 he graduated from the Medical College of Ohio, and two months later was appointed demonstrator of anatomy in that institution. In 1876 he was elected Professor of Theory and Practice of Medicine in the Medical College of Fort Wayne, which chair he held three years. Dr. Stemen held for many years the position of Chief Surgeon of the Western Division of the Pennsylvania Lines, and local surgeon of the Wabash lines. Not only was Dr. Stemen noted as a physician and educator, but possessed a true Christian character, and was a licensed preacher in the Methodist Episcopal Church. He was for some time President of Taylor University, Upland, and until the time of his death was trustee of that institution. He also held the positions of trustee of Purdue University, LaFayette, and dean of the Fort Wayne Medical College. In speaking of his death the Fort Wayne Sentinel says: "A career of unusual usefulness, marked by high endeavor and conspicuous accomplishment in many avenues of life, was brought to a close in the death of Dr. Christian B. Stemen. For many years, as physician, student, educator, lecturer and preacher, Dr. Stemen occupied a prominent position, and it was his high privilege to continue his work down to a ripe old age. The world is distinctly better for having enjoyed the ministrations of this kindly, sincere and capable man."

At a recently called meeting of the Fort Wayne Medical Society, the following resolutions concerning the death of Dr. C. B. Stemen, were passed:

In the sad death of Dr. C. B. Stemen, the Fort Wayne Medical Society deplores the loss of a most respected member, prominent in its work for many years, well-known in Indiana and surrounding states, and remembered with kindness by a host of lay and professional friends.

His many activities in other commendable fields than medicine will be suitably recorded by other bodies, but we would rather dwell on his long, active, useful and successful career as a physician and surgeon, and not alone in relation to the American Medical Association, of which this Society is a branch, but also as one of the organizers of the Fort Wayne College of Medicine, thirty-five years ago, and the founder of a medical journal that was the predecessor of the present State Association Journal, and in helping to raise railway surgery to the dignity of a specialty.

We take this occasion to offer to Dr. Stemen's bereaved wife and family our sincerest sympathy and the expression of our regrets for the loss that, in all kindness, we share with them.

There is, however, much of consolation in the memory of a well-spent lift in the service of humanity, and the reflection that, in the

passing of a good and faithful servant, his works do follow him into a higher future state, is full of comfort. Even in death our friend's work is a power that makes for righteousness on the earth. We rejoice in this link between his finished labor and the tasks and hopes that remain to us. We are glad that he lived; we are glad that we knew him; we are glad to ensure the fulfilment of his sacred wish:

O, may I join the choir invisible
Of those immortal dead who live again
In minds made better by their presence, live
In pulses stirred to generosity
In deeds of daring rectitude, in scorn
For miserable aims that end with self,
In thoughts sublime that pierce the night like stars,
And with their mild persistence urge man's search
To vaster issues! So to live is heaven—
To make undying music in the world.

Dr. W. P. Whery, Chairman.
Dr. M. F. Porter.
Dr. E. J. McOscar.
Dr. B. Van Sweringen.
Dr. G. L. Greenawalt.

NEWS NOTES AND PERSONALS

INDIANAPOLIS

The controversy between the Board of Health and the University over the interpretation of the contract under which the City Dispensary was conducted has been settled to the satisfaction of all parties concerned. The new contract is very similar to the old one with the exception of making more explicit certain mooted clauses, and with the added provision of a committee, one of which is appointed by the Board and one by the University and a third by these two. This committee is to be advisory in function only. Dr. John Oliver is the University representative and Dr. Thomas B. Eastman from the Board of Health. The third has not yet been appointed.

Between the 11th and 13th of November over 2,500 cases of gastrointestinal malady occurred in Indianapolis, mainly between Capitol Avenue and College Avenue and north of Fall Creek. This malady was characterized by a sudden onset, absence of prodromes, no fever, or else subnormal temperature, nausea, vomiting and purging. This was followed by extreme prostration, the whole lasting from twenty-four to forty-eight hours. It seemed to respond to cathartics, such as broken doses of calomel with salines and castor oil. The liver seemed to be the organ mostly affected, producing an acute hepatitis. In some cases the gall-bladder was extremely tender and in some jaundice occurred. Some of the patients became unconscious and in one case of a man aged 82, death occurred. The urine contains large amounts of urea and urates. In all cases the blood and stools were examined by both city and state board of health and private laboratories and no specific organism was found. Various theories have been advanced as to the causation of this epidemic. After thorough investigation by the secretary of the City Board of Health, Dr. Morgan states that there was no common food which could have caused it. The main which has supplied this section of the city with water also supplied other sections of the city. The water has been carefully examined, as it has been every day for years, and there has been no increase of bacteria found in it. As people who boiled their water also have had this disease the theory has been advanced that it was due to a chemical irritant of some character. Various laboratories of the city are still working on the case. (Authorized statement of the secretary of the city board of health, Dr. Morgan.)

Nothing could demonstrate more forcibly the deplorable situation in which the Indianapolis Medical Society finds itself in the matter of a place for its meetings than the occurrence of a few weeks ago when they found themselves unceremoniously shot out of the Washington Hotel because the manager had seen fit to let the room to the chiropractors. Any one who had a doubt that the Society needs a permanent home of its own certainly had those doubts dispelled if he sat crowded into the little two by four rooms where the meeting was held on this occasion while the chiropractors gleefully stamped the floor above. As a matter of fact, we think this would be a good place to rise and make a few remarks about the Indianapolis Medical Society. That there is something the matter with it, no one familiar with the facts will deny. It is not to be found in the officers, who are efficient and hard working. We would suggest that a committee of experts be called in to go into the case carefully and if possible make a diagnosis. As a starter this committee might go over the records and find out how many papers have been contributed to the society by the men who today claim a leadership in the various specialties which they represent, in the last five years. Having been a pretty

regular attendant during that time, your correspondent thinks the records will show that these men not only do not contribute anything, unless it be an occasional case report, but they seldom are seen at the meetings. By common consent these men are supposed to represent the scientific attainments of a medical community, and the medical society ought to be a medium through which a diffusion of medical progress is accomplished. With this view of the function of a medical society, the leaders will not quit attending when they have gotten all the business they want.

GENERAL

Dr. M. Ravdin, of Evansville, has been quite seriously ill.

Dr. W. A. Oyler, formerly of Ober, has located at Knox, Ind.

Dr. J. H. Fargher, of La Porte, is taking special work at the Chicago clinics.

Dr. Freeman Bannon has located at Kokomo for the practice of medicine.

Dr. George W. Willeford, of Washington, is making an extensive tour of the West.

Dr. Herman Baker, of Huntingburg, has added to his office a fully equipped laboratory.

Dr. James L. Biggenstaff has opened an office at Wabash, for medical and surgical work.

The home of Dr. G. W. Grossnickle, of Elkhart, was damaged by fire on November 14.

Dr. C. C. Givins of Lewis, has been suffering with angina pectoris but is much improved.

Dr. Robert F. Taylor, formerly of Warrick County, died recently at his home in Napa City. Cal.

Dr. Herbert M. Senseny has been appointed local surgeon for the Nickel Plate Railroad at Fort Wayne.

Dr. T. Roy Cook, of Bloomfield, has been quite seriously ill at the Linton Hospital, but is improving.

Dr. Omer D. Hutto, of Kokomo, who has been doing Post-Graduate work in New York City for the past two months, has returned home.

Dr. Whitefield Bowers has tendered his resignation as secretary of the board of health of Michigan City.

Dr. G. W. Thompson, of Winimac, was married on November 25, to Mrs. Julia Williams, of Winimac.

The schools of Amboy and North Grove, Miami County, have been closed on account of diphtheria and scarlet fever.

The Seventh District Medical Society held their 1915 meeting at Franklin, November 18. The meeting was well attended.

The home of Dr. D. W. Welch, of Mount Vernon, was partially destroyed by fire recently. The loss is estimated at $1,250.

Dr. C. C. Munk, of Chicago, has purchased the business and office equipment of the late Dr. F. M. Perkins, of Kendallville.

Dr. Patrick Weeks, of Indianapolis, has located at St. Paul for the practice of medicine, taking up the practice of Dr. G. J. Martz.

Blackford County is to have two tuberculosis hospitals under the Red Cross Society, located at Montpelier and Hartford City.

Dr. and Mrs. E. P. Masgana, of Vincennes, have gone to France where Dr. Masgana will enter the Red Cross work.

The Kotana Medical Association, comprised of physicians of western North Dakota and eastern Montana, was organized October 19.

Dr. H. L. Townsley, of East Chicago, has been confined in the St. Margaret's Hospital, Hammond, suffering from gallstones and chronic appendicitis.

The Nobel Prize for 1914 has been awarded to Dr. Robert Barany of the University of Vienna because of his work on the physiology and pathology of the ear.

Dr. J. H. Wrork, of Shelburn, was operated on at the Union Hospital, Terre Haute, November 16, for appendicitis. He is making an uneventful recovery.

One Hundred members of the Association of Big Four Railway Surgeons attended the twenty-first annual meeting at the Claypool Hotel, November 17 and 18.

DR. F. A. ZELLER, of Portland, recently suffered a dislocated and broken elbow as a result of a collision of the buggy, in which he was riding, with another carriage.

DR. H. L. IDDINGS, formerly of Merrillville, who has been traveling through the West and along the Pacific coast, has located at Fort Benton, Montana, with his son.

IN the Indianapolis Star of November 7 appeared a very interesting history and story of the growth of the medical profession in Indiana by Dr. G. W. H. Kemper, of Muncie.

DR. J. CHRIS O'DAY, formerly of Indiana, now of Portland, Oregon, has been elected president of the Indiana Society of Oregon. This club aims to make the stay of all Indianans in Oregon an enjoyable one.

DRS. W. D. AND JESSIE C. CALVIN of Fort Wayne, attended the Mississippi Valley Medical Association at Lexington, Ky., and also the annual meeting of the American Association of Hygiene which convened at Chicago.

HENRY CHARLTON BASTAIN, M.D., of London, England, well known neurologist and biologist, died at his home in Fairfield, Chesham Bois, Buckinghamshire, England, November 17.

DR. WILLIAM ALLEN PUSEY of Chicago, in an address before the Chicago Medical Society recently, stated that there are 500 cases of leprosy in the United States—275 in New Orleans, 100 in New York City, 50 on the Mexican frontier, and 5 in Chicago.

ST. JOSEPH HOSPITAL, Mishawaka, has added a new maternity hospital annex to their building. The annex has three private rooms and three rooms used as wards, delivery room, kitchen and special infants' room, and will accommodate twelve patients.

DRS. H. C. and FRANK ROBINSON, together with Capt. J. H. Welch and F. T. Singleton, of Martinsville, have purchased the Colonial Sanitarium, including the Sanitarium buildings and equipment, three lots, and the business of the Colonial Mineral Springs Company.

At the annual election of the Fort Wayne Medical Society the following officers were elected to serve for the year 1916: President, Garrette Van Sweringen; Vice President, A. L. Schneider; Secretary, Miles F. Porter, Jr.; C. G. Beall and Chas. R. Dancer, delegates to the State Association.

PHYSICIANS of Whiting have organized "The Physicians' Club of Whiting," with the following officers: President, Dr. G. H. Hoskins; Secretary-Treasurer, C. M. Gillespie; Program Committee, G. H. Hoskins, C. M. Gillespie, Harry Timson; Financial Committee, A. J. Lauer, E. K. Newton, and E. L. Dewey. The Club will meet the first and third Mondays of every month.

DR. JAMES A. MURRAY, director of the Imperial Cancer Research Fund, in London, recently sent to the Columbia University laboratory in New York duplicates of all cultures and specimens that have been developed in London through thirteen years of work by the fund. This safety measure was taken to provide against loss in case Zeppelin raids on London might destroy the laboratories and contents. The specimens sent to New York were placed in charge of Dr. Francis Carter, director of the Crocker Cancer Research Fund of Columbia University.

AT the regular meeting of the Ohio Valley Medical Association held at Evansville, Indiana, November 4, the following officers were elected for the ensuing year: President, George M. Young, Evansville; First Vice President, William Shimer, Indianapolis; Second Vice President, J. R. Pennington, Chicago; Third Vice President, W. F. Boggess, Louisville; Secretary Treasurer, B. F. Floyd, Evansville.

EVANSVILLE is establishing a new city dispensary for the poor of the city, and every physician of Evansville has been asked to devote one day each week to the care of charity cases at the dispensary. Their plan is to have one eye, ear, nose and throat specialist, two surgeons, and two practicing physicians in attendance every day. A trained nurse will be employed to have charge of the dispensary.

DR. BUDD VAN SWERINGEN, of Fort Wayne, has been chosen Chief Surgeon of the Western Division of the Pennsylvania lines, to succeed Dr. C. B. Stemen, whose death occurred recently. Dr. Sweringen has served as assistant surgeon, under Dr. Stemen, for the past two years, and his promotion comes to him as recognition of his work in this department. Dr. Garrette Van Sweringen has been appointed Assistant Surgeon.

The Red Cross Association has opened a contest for the design for the Red Cross Christmas seal for 1916. Five prizes are offered valued at $100, $50, $25, $15 and $10, respectively, said prizes to be taken from the expense fund set aside for the antituberculosis campaign. All designs must be in not later than February 1, 1916. Full particulars may be obtained from the American Red Cross, Washington, D.C.

The Dr. Miles Medical Company, of Elkhart; the Dr. Whiteall Megrimine Company, of South Bend; the Wright Medicine Company, of Peru; the Binkley Medical Company of Nappanee; and the Spohn Medical Company, of Goshen, have been indicted for fraud in regard to the "remedies" put out by these companies. This comes as a result of sweeping investigations made by the grand jury of alleged violations of the pure food and drug act.

A preparation put up in imitation of neosalvarsan, containing labels in exact reproduction of the imported article, is being distributed to drug stores as neosalvarsan. An examination shows it to be nothing more than salt colored with a coal tar dye. Other worthless imitation drug products, purporting to be acetylsalicylic acid or aspirin, have also been discovered, and several shipments of these preparations have been seized by the officials in charge of the enforcement of the Food and Drugs Act.

The United States Public Health Service, in a campaign to teach people to combat disease, has established a "stereopticon loan library." A wide range of subjects is covered by this library. It portrays sanitary conditions in Alaska, and there are special collections on the diseases of children, the hookworm, leprosy, malaria, milk production, mouth hygiene, pellagra, plague, rural schools, smallpox, tropical diseases, tuberculosis and typhoid fever. These slides covering the different phases of the subjects are loaned out, on request, to sanitarians, educators, and any person interested in the promulgation of personal and public sanitation. The surgeon-general's office has prepared a catalogue containing photographs of the slides and descriptive matter, and these are sent out to persons interested that intelligent selection of slides wanted may be made.

Hammond, Indiana, and West Hammond, Illinois, have been having an epidemic of smallpox. About thirty-five or forty cases have been found. About 2,300 persons have been vaccinated since the epidemic broke out. Two deaths from tetanus, following vaccination, have occurred; one, a boy of nine years, died November 23, and a boy of seven years, died November 26. In the former case, the boy had been vaccinated about seventeen days preceding the recognition of the first symptoms of tetanus; and in the second case, the time elapsing between vaccination and the onset of first symptoms is rather indefinite, owing to the fact that two series of vaccination were made on the children in the school which the boy attended, but was either fifteen or twenty-two days. These cases both occurred in West Hammond, Illinois, where 1,300 persons were vaccinated, and all vaccinations were made with vaccine points from the same source. No other persons of those vaccinated have shown any symptoms of tetanus.

The Central Indiana Hospital for the Insane has announced a course of lectures to be given at the Pathological Department of the Hospital at Indianapolis, beginning October 9, 1915, and continuing through until May 1916. The course includes lectures in Mental Pathology, by Prof. E. H. Lindley, Professor of Psychology and Philosophy, Indiana University, and Max A. Bahr, M.D., Clinical Psychiater at the Central Indiana Hospital for the Insane, and Associate in the Department of Mental and Nervous Diseases in the Indiana University School of Medicine; a course in Mental and Nervous Diseases with illustrative cases, by Albert E. Sterne, M.D., and Frank F. Hutchins, M.D., the Professors of Mental and Nervous Diseases in the Indiana University School of Medicine. Each clinic will terminate with a General Clinical Conference in which the above named professors and the members of the Hospital Staff will participate. The work in Neuro and Mental Pathology will be given by Frederick C. Potter, M.D., the Pathologist of the Central Indiana Hospital for the Insane, and Assistant in the Department of Mental and Nervous Diseases in the Indiana University School of Medicine.

During November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Antiseptic Supply Co.: Iodoapplicators. Iodoapplicators, special. Iodosticks.

The Bayer Company, Inc.: Iodothyrine Tablets, 3 grs. Theocin-Sodium-Acetate Tablets, 1½ grs. Thyresol Pearls, 5 grs.

Merck and Co.: Agar Agar Powder, Merck. Agar Agar Shreds, Merck. Berberine Hydrochloride, Merck. Calcium Peroxide, Merck. Ethyl Salicylate, Merck. Fluorescein, Merck. Formic Acid, Merck. Mercury Cyanide, Merck. Mercury and Potassium Iodide, Merck. Mercury Succinimide, Merck. Morphine Meconate, Merck. Osmic Acid, Merck. Sodium Oleate, Merck. Sodium Peroxide, Merck. Thiosinamine, Merck. Urea, Merck. Zinc Peroxide, Merck.

H. K. Mulford Co.: Ampuls Emetine Hydrochloride 0.005 Gm. Ampuls Emetine Hydrochloride 0.02 Gm. Ampuls Emetine Hydrochloride 0.04 Gm. Ampuls Mercury Succinimide 0.1 Gm. Ampuls Pituitary Extract ½ Cc. Ampuls Quinine Dihydrochloride 0.24 gm. Ampuls Quinine Dihydrochloride 0.5 Gm. Ampuls Quinine and Urea Hydrochloride 1 per cent. Ampuls Sodium Cacodylate 0.1 Gm. Ampuls Sodium Cacodylate 0.2 Gm. Ampuls Sodium Cacodylate 0.5 Gm. Ampuls Sodium Cacodylate 1 Gm. Purified Tricresol, Mulford. Scarlatinal Strepto-Serobacterin (Therapeutic).

Powers-Weightman-Rosengarten Co.: Calcium Peroxide, P.W.R. Magnesium Peroxide, P.W.R. Sodium Perborate, P.W.R. Sodium Peroxide, P.W.R. Strontium Peroxide, P.W.R. Zinc Peroxide, P.W.R.

Swans-Myers Co.: Swan's Staphylococcus Bacterin (No. 37). Swan's Streptococcus Bacterin (No. 43). Swan's Typhoid Bacterin (No. 44) (Prophylactic).

CORRESPONDENCE

"AUTOLYSIN" TREATMENT FOR CANCER

Versailles, Indiana.
Nov. 4, 1915.

Editor The Journal:—You will note by the enclosed newspaper clipping that Dr. Curran A. Pope, of Louisville, Kentucky, discussed before the Ohio Valley Medical Association the "Autolysin" treatment for cancer, and is reported to have declared that the treatment has proved successful in cases that were termed hopeless.

Will you tell us something about this in The Journal? What is this "autolysin" treatment, and is there anything in it?

Very truly yours,
R. I. Olmsted.

Answer:—Our readers are referred to *The Jour. A. M. A.* for November 6, 1915, in which will be found a special article entitled "The 'Autolysin' Treatment for Cancer," by Richard Weil, M.D., of New York City; and to an editorial on the same subject in the same number of *The Jour. A. M. A.* Dr. Weil's paper is based on the observations of effects of "autolysin" treatment on cancer in the General Memorial Hospital of New York, as also the results of treatment in special cases. His conclusions are that "autolysin" has certain of the characteristics that are presented by many of the cancer nostrums of past centuries. He concludes by saying, "My own personal belief, founded on long observation, is that "autolysin" is useless; that it adds nothing of value to the methods now generally accepted; and that it often aggravates the sufferings and accelerates the death of the patient." In the editorial in *The Jour. A. M. A.* it is stated that "autolysin" was brought into the limelight of publicity chiefly through the medium of sensational newspaper and magazine articles. This was accomplished before the preparation had been so tried out as to establish without question its value or lack of value. The editorial concludes by saying that the methods of exploitation have been unworthy of scientific men, and in their effects upon the public the very refinement of cruelty.

SOCIETY PROCEEDINGS

TENTH DISTRICT

Tenth District Medical Society met in regular session at Gary, November 23.

The scientific program consisted of the following papers: "The Hernial Aspect of Cystocele, Rectocele, and Uterine Prolapse; and Principle and Technique of Perineal Herniplasty," by Dr. Channing W. Barrett, Chicago; "Induction of Labor at Term," by Dr. C. B. Reed, Chicago; and "Gall Bladder Surgery," by Dr. H. M. Richter, Chicago.

Following the scientific program a banquet was held at which Drs. George F. Keiper, Harry Sharrer and Fred Sauer were the speakers.

Officers for the ensuing year are Dr. M. D. Gwin, Rensselaer, president, and Dr. J. W. Iddings, Lowell, secretary.

TWELFTH DISTRICT

Twelfth District Medical Society met November 10 at Fort Wayne with a good attendance.

Dr. Albert E. Sterne of Indianapolis conducted a neurologic clinic at St. Joseph's Hospital at 9:30 a. m., and in the afternoon the following scientific program was given: "A Wells County Disease," Dr. Fred Metts, Bluffton; "The Practical Use of Electrocardiography," Dr. George S. Bond, Indianapolis; "Coagulation of Cow's Milk in the Human Stomach, (with demonstration of specimens)," Dr. Joseph Brenneman, Chicago; "The Use of Pituitrin in Obstetrics and Gynecology," Dr. W. G. Dice, Toledo.

A pleasant social feature of the meeting was the luncheon at 12 m. at the Anthony Hotel.

INDIANAPOLIS MEDICAL SOCIETY

Hotel Washington, Nov. 2, 1915

Meeting was called to order by the president. Motion to have the chair appoint a chairman of committee on arrangements for Mississippi Valley Medical Society carried.

Program: Dr. Erdman reported a case of "Complications Following Salvarsan."

The patient, male, aged 30, with a negative family history other than an attack of appendicitis for which he was operated about a year ago. Diagnosis of a clinical hard sore on the buccal mucous membrane opposite the canine tooth on the left side, made clinically as well as by dark field illumination. Spirocheta pallida demonstrated. Received three doses of salvarsan, first dose 3 decigrams; second dose five days later, 3 decigrams; third dose five days later, 4 decigrams. About forty-eight hours after last dose, patient had coated tongue and general feeling of depression and malaise. Says he voided 9 ounces of urine in twenty-four hours; in the following twenty-four hours, 14 ounces. Both specimens contained blood, macroscopically and microscopically; third twenty-four hours, 20 ounces; fourth twenty-four hours, 28 ounces; fifth twenty-four hours, 70 ounces; sixth twenty-four hours, 72 ounces; seventh twenty-four hours, 38 ounces. All specimens bile-laden. Jaundiced the second day. Temperature ranged from normal on fourth day, to 102.6. Last specimen of urine examined showed no albumin or blood but was loaded with bile. Comment: Review of Pusey's monograph; some excerpts from Wechselmann's Salvarsan Fatalities, and some queries in regard to interval of dosage and amount of dosage.

Dr. O. N. Torian presented a case of splenomyelogenous leukemia. Child, aged 11 years, with luetic family history. Previous personal history without unusual incident. Physical examination entirely negative, except for a slightly enlarged liver and enormous spleen filling four fifths of the abdomen. First visit, Sept. 28, 1915. Wassermann negative, blood culture negative and urine negative. Blood count, white, 376,600; red, 2,386,000; hemoglobin, 45 per cent. Many eosinophils, many mast cells, many myelocytes and many polymorphonuclears. Benzol was given in increasing doses to present time and is now taking 45 drops three times daily. White blood count, October 29, 275,600; one-half massive dose Roentgen ray applied to legs. November 1 white blood count, 197,600. Urine much albumin and few granular casts. Patient is somewhat improved, it appears, but spleen is practically same size. The benzol will be continued and the Roentgen ray reapplied in about two weeks.

Dr. E. E. Padgett reported two cases.

Case 1.—Case of appendiceal tuberculosis. Patient, male, white, aged 35, woodworker by occupation, was injured in June, 1915, by being struck with an automobile. During stay in hospital immediately after injury, developed temperature, rapid pulse and extreme tenderness and pain in lower right quadrant of abdomen. Was in and out of hospital at intervals until October 22, when he entered St. Vincent's Hospital. At this time he was anemic, pulse 122, temperature 99 to 101, tenderness and pain with the presence of an indefinite mass in lower right quadrant of abdomen. Has lost about 40 pounds in weight. Lungs and heart examination negative. Rest in bed for five days with very light diet reduced pulse to 88, but temperature remained about same. A probable diagnosis of peritoneal tuberculosis was made and patient operated October 27, 1915. Peritoneum as a whole was found free from tuberculosis or any adhesions. In region of appendix was a mass bound down by adhesions. On dissection a large quantity of pus escaped. Appendix was removed along with adhesions which bound it down to posterior parietal peritoneum. Its tip extended below the brim of the pelvis. The mass of adhesions as well as the tip of the appendix showed numerous small hard lumps believed to be tubercles. The diagnosis was confirmed by microscope.

Case 2.—Cancer Encirasse. Patient, white, aged 30, the mother of two children. Family history tubercular. Has been a sufferer from pulmonary tuberculosis herself. Lungs now clear. One year ago noticed small lump in breast on left side. Was advised to watch it and see if it grew. After about six months of steady growth was treated for three months by means of injections of some kind. Growth was steady and when she came for examination Sept. 5, 1915, the entire breast was involved in a growth of almost stony hardness. There were numerous small lumps firmly adherent to the skin, and two large lumps and many small ones in the axilla. A wide dissection was done from above downward, removing axillary glands and fat breast and muscles down to the ribs. Immediate recovery was satisfactory, and at the end of two weeks patient was put on Roentgen-ray treatments once a week. One month after operation small lumps appeared in the skin in two distinct areas widely separated from the original incision. These were removed under a local anesthetic, and the Roentgen-ray applications are being continued.

DISCUSSION

Dr. Charleton: Stated in a complicated case the cause was forgetting to alkalinize the solution. Patient developed quickly intense coughing followed by extreme jaundice. Recovery.

Dr. Cregor: Experiments in rabbits show that arsenic is deposited in lungs which might explain the cough. I do not believe these complications are contraindications in administering salvarsan. Had Dr. Erdman not been very careful there might have been a fatality.

Dr. Levis: Is it not possible for an occasional ampule to be more toxic than others?

Dr. Brayton: There have been no accidents in our clinics except sore elbows when salvarsan is not put in the vein. Salicylate of mercury would be just as good as salvarsan in many cases, and never result in abscesses. Potassium iodid does not cure syphilis. Mercury and Ehrlich's product only will cure syphilis. Two thirds of syphilis is treated by proto-iodid of mercury, one fourth of a grain three times daily.

Attendance, 80. Meeting adjourned.

Hotel Washington, Nov. 9, 1915

Meeting was called to order by first vice president, Dr. Ada E. Schweitzer. The society voted an assessment to help defray the expenses of the meetings of the Seventh Councilor District.

PROGRAM

Dr. Emerson read a paper on "Mold Infection of the Lungs." The essayist emphasized the importance of examining the fresh sputum of all doubtful cases, for only in this way can molds be demonstrated. The large amount of medical lore concerning the sputum has been neglected since the discovery of a few specific germs, although the information to be derived from this examination is just as true as ever and often helps in the diagnosis of the ones in which the bacteriological examination is of little importance. Pulmonary aspergillosis is of interest historically since it was perhaps the first lung disease the lesions of which were definitely attributed to a specific organism and this nearly thirty years before the discovery of pathogenic bacteria. Cases of this infection cannot be rare for they are found whenever one is interested to look for them. Two cases were reported, the one of a pure bronchial and the other of broncho-pneumonic type. They emphasized the chronicity of the infection, the absence of general systemic disturbances, the paroxysms of coughing, the severe dyspnea and orthopnea. In neither case was Bacillus tuberculosis found on repeated examination. The mold was demonstrated in the fresh sputum by the microscope and was recovered in pure culture by the proper cultural methods.

Dr. Henry: Aspergillosis or false tuberculosis is more common than is generally known. No doubt it is often overlooked inasmuch as it manifests many of the same symptoms as Koch's tuberculosis. Cavities may be formed and intense coughing, profuse expectoration and dyspnea are especially observed. Slight loss of weight, slight temperature and general exhaustion from loss of sleep and difficult breathing are present. Aspergillary tuberculosis cannot be diagnosed by physical examination alone. The aspergillus fumogatus must be found by the microscope. There are primary cases, and most cases are complicated with Koch's type.

Dr. Dodds: Apart from the bacterial forms already mentioned such as B. tuberculosis, diplococcus pneumoniae, pyogenic cocci, B. mallei, B. anthracis, and actinomyces, vegetable parasites are rare and few of them are of importance. Various forms of molds such as Aspergilli, Mucor, Eurotium and the thrush fungus, have been described. They are liable to be found wherever destruction of the lung substance is going on or where there is stagnation and decomposition of secretion. Some are accidental, while others must be regarded as pathogenic. The disease is met with in birds, horses and cattle, but occasionally attacks man. The lesions produced resemble those of tuberculosis. It is practically impossible to distinguish fungus infection from any of the infiltrative inflammatory pathogenic bacteria only by the use of the stereorocntgenograph. In the case which I have reported the infiltrative area as shown by the shadow cast was in the left bronchial tree. The distinction is the clear cut shadow. You will see by the stereophotograph by Dr. Dunham from Professor Kelly's clinic that his cases correspond. This really seems true in advanced tuberculosis that they are confined to the left bronchial tree. Attendance 85.

Meeting adjourned.

City Hospital, Nov. 16, 1915

Meeting was called to order by the president. Dr. T. J. Beasley was elected to membership.

Dr. D. W. Layman read a paper on "Autogenous Vaccine—An Aid in the Treatment of Chronic Inflammatory Diseases of the Accessory Sinuses of the Nose." Report of cases. Abstract follows: The difficulties to be overcome in effecting a cure of chronic infectious diseases of the accessory sinuses of the nose are appreciated by rhinologists. Even radical surgery of these parts fails at times to bring about a cure. A method of treatment that will aid in obtaining a favorable result in many cases of this kind is vaccine therapy. A vaccine of known strength, containing killed micro-organisms of the same kind that are present in the infected area, that is, a pure culture of the pathogenic bacteria is injected into the patient. If improvement follows, it is due to the fact that there is an increase in the specific antibody content of the blood stream, and when these antibodies are conveyed to the infected areas they aid the involved tissues in overcoming the infecting micro-organisms. A general consideration of the etiology, pathology and symptoms of the cases reported were given to avoid too long individual case reports. Most of the cases had the usual symptom-complex of chronic sinusitis, with acute exacerbations. The paper took up the bacteriology of chronic diseased sinuses, showing that this was attended with difficulties, so far as the isolation of the principal infecting organism is concerned. In the preparation of the vaccine the essayist stated that both the usual methods and the methods of animal experimentation were used. The size of the doses, as well as the interval between them, was gaged by the extent and duration of the reaction. The patients were closely observed clinically as a guide in judging the dose. All these diseased conditions were confirmed by Roentgen-ray pictures. The duration of these cases varied from two to five years. The report of these cases (vaccine therapy having been given along with the usual treatment) shows that the discharge had been checked and the time of convalescence was undoubtedly shortened. In two other cases of the above class the discharge was lessened in amount and free from odor, also there was absent the severe disturbing symptoms of sinusitis. In two cases of the second class, no other treatment was given but the vaccine injections. The report of these cases shows that the action of vaccine therapy, per se, that is, without the assistance of other means of treatment, such as conservative surgery, irrigations, etc., failed to be of any benefit as a therapeutic agent. The cases in the third class were treated without the aid of vaccine but the usual methods of recognized sinus treatment. They were given the treatment about the same time as the others so that they were not particularly urged to take the vaccine or to compare the results. These cases were not cured but there was an improvement, which, however, was not as marked as in similar cases which were given the vaccine.

Dr. P. E. McCown read a paper on "Some Later Methods Used in the Diagnosis and Treatment of Sterility." The change of the normal alkaline reaction of the uterus and cervix is destructive to the sperm which flourish in the alkaline media. When such condition is discovered it is advisable to use means to relieve the congested and infected conditions of the organs in order that the secretions may return to normal. It has been pretty definitely determined that the wife may become immune to her husband's sperm because of destruction of sperm in the abdomen by the leukocytes. Long continence is suggested as a remedy for this in order to permit the wife to lose this immunity. When all methods of delivering the

spermatozoa into the uterine canal have failed artificial fecundation is recommended. On the male side, careful examination of the spermatozoa for the determination of their motility should be made. In the absence of sperm in the condom specimen, examination for obstruction of the vas deferens should be made. It sometimes happens that azoospermia occurs from nerve exhaustion with associated atonicity of the genital organs. This should be looked after with rest and local treatment. Operation for the relief of stricture of obstructed conditions of the vas deferens and epididymis is recommended, as resection of the vas should the obstruction occur in its scrotal portion, vaso-epididymostomy, or joining the vas to the head or tail of the epididymis in the event the vas is opened through to the posterior urethra. The last is recommended in the event the obstruction is in the epididymis. Abnormal secretion in the male genital canal due to inflammation of the prostate and seminal vesicles sometimes change the reaction of this fluid to acid which destroy the sperm. Also as a result of inflammation there are adhesive gelatinous masses formed in the fluid which imprisons the sperm, not permitting their normal migration. Furthermore, as a result of inflammation there exists proteolytic enzymes which have an inhibiting influence on the viability of the sperm. Such conditions can be relieved by local treatment directed to the prostate, seminal vesicles and colliculus. In atonic conditions the spermatozoon is not deposited near enough to the cervical opening in order that the sperm may reach it before being destroyed by the acid vaginal secretions. Likewise, hypospadias prevent near deposit of the sperm to the cervix. Artificial fecundation may be done in such cases or by local treatment the atonic conditions are relieved.

DISCUSSION

Dr. Langdon: We must look to Metchnikoff rather than Ehrlich for an explanation of the production of immunity. In bacterial infections the opsonins are lowered but may be supplied by vaccines. The successful use of vaccines depends on several conditions: (1) Kind of bacteria; (2) location of infected area; (3) preparation of vaccine; (4) manner and time of administration; (5) proper selection of cases. Sera contain antibodies of organisms while vaccines contain the bodies and produce the antibodies.

Dr. Clevenger: Dr. Lyman's paper is, or should be, of interest to every member of the society. Rhinological and oto-laryngological problems are oftentimes complex in their end results and this statement applies especially to conditions requiring the radical mastoid operation and to chronic inflammatory conditions of the nasal accessory sinuses. New procedures, like vaccine therapy, are used generally by all classes of physicians the country over and undoubtedly in many instances in an empirical way. It seems to me that there can be no more important specialty than that involving the intricate technic of laboratory work. We have many competent surgeons but comparatively few really capable pathological and bacteriological workers. It is, it seems to me, most important that the preparation of vaccines be intrusted to the hands of men of high attainment in this work. The laryngologist or general surgeon knows really very little about the preparation of vaccines or vaccine therapy. The work of both is necessarily surgical. Therefore this important line of therapy should go to the men who are qualified to render such service and the surgeon will do well to turn this work over to the laboratory man. Any success I have had in vaccine therapy is due wholly to the men who have prepared and administered the dose and to them we are indebted. This work is a specialty and an important one. I wish to congratulate Dr. Layman on the excellent manner in which he has handled the subject.

Dr. Carmack: Investigations have been stimulated in this field since the importance of internal secretions and altered chemistry of the body has been proven. Discussion on sterility begins with a consideration of the presence or absence of living and healthy ova and spermatozoa. It has been demonstrated in the male that mental stress, overwork, sexual overindulgence, excess of alcohol and tobacco, increased adiposity or poor nutrition result in a disappearance or a decrease in vitality of the sperm. The same general condition no doubt obtains in the female. Highly nervous women are often sterile. A husband and wife supposed to be sterile may separate for a time then beget children. One theory of sterility is inoculations of female with sperm which are destroyed by the white cells which sensitize the individual with the formation of antibodies thus preventing conception.

Dr. Charleton: From a scientific point of view the paper is more than adequate. Survival of the fittest is Nature's scheme. This order is being reversed. Defective spermatozoa are bound to produce defective children.

Dr. Padgett: Mechanical displacements are responsible for an apparent sterility. Cited two cases of small hard ovaries and infantile uterus. Advised ovary extract.

Dr. Tomlin: Vaccines do well if complete drainage is established. They also do better without irrigation.

Dr. Coble: The use of autogenous vaccines are undoubtedly of great benefit in properly selected cases. However, one must often use surgical procedures to maintain good drainage. Many cavities drain into the nose. There is always a residual amount of pus in the cavity unless drainage is established from below. Cases of this type should pass through one winter without reinfection before pronounced free from having some remote point that may possibly give trouble.

Dr. Erdman: Acute flexions, retroversions, etc., have little or no bearing on the question of sterility. Cited cases where a child was born at twelve months, another nineteen years and one a year later. Persons having double gonorrheal epididymitis often never have children or until a long time.

Attendance 85. Meeting adjourned.

Alfred Henry, Secretary.

THE MUNCIE ACADEMY OF MEDICINE

Meeting of October 29, 1915

The regular meeting of the Muncie Academy of Medicine was held in Muncie Y. M. C. A. building, Friday evening, October 29, and was called to order at 8:15 by President O. E. Spurgeon, M.D.

Dr. I. N. Trent conducted a very profitable quiz on "The Gross Anatomy of the Chest."

Dr. F. W. Dunn read a paper on "The Diagnosis and Treatment of Pneumonia." Dr. Dunn grouped his symptoms very nicely and explained the details

necessarily considered in making a differential diagnosis, but showed very little optimism when it came to medical treatment; however, he backed his conclusions by quoting from Osler, Thompson, Hare and Tyson, showing that he was in distinguished company. One commendable feature of the paper was the condemnation of poultices and cumbersome applications of all sorts to the chest.

In discussion Dr. Fair averred that the testimony of one who gets results by the use of certain remedies is worth more than that of one who does not believe it possible. Dr. Fair believes that pneumonia can be aborted and recommends lobelia, veratrum, capsicum and sometimes aconite. Capsicum is an efficient and safe stimulant presenting none of the hazards of either strychnia or digitalis. When a pneumonia that is expected to run for from seven to ten days is ended in three or four, we certainly ought to give credit to the treatment.

Dr. J. C. Quick said that one seldom sees pneumonia without a loaded alimentary tract; therefore, thorough evacuation is the first essential. On a starvation diet the pneumococci have little on which to thrive and the disease is shortened and the patient gets well.

Dr. Peyton spoke very highly of gelsemium, particularly in children, recommending mild continued catharsis rather than violent purging.

Dr. Wadsworth is enthusiastic regarding the cold fresh air treatment.

Dr. O. E. Spurgeon believes in the effectiveness of drug treatment of pneumonia. He also cited several instances where mixed bacterins produced marked beneficial results in thirty-six hours. He says pneumonia is rare or impossible in a child with a respiration rate under 60.

Adjourned.

Meeting of November 12, 1915

A quiz on the "Pathology of Pleuritis," was conducted by Dr. D. M. Green.

Dr. B. B. Morrow read a paper on "The Complications of Pneumonia," saying: We now regard pneumonia as a general pneumococcus infection with the lesion in the lung as but one of its complications. Lung infection may be primary or secondary. During pneumonia pneumococci may be found in the blood stream, lymph channels and most any organ of the body. Disease in any place may become a complication of pneumonia. Bronchitis is always present and may be considered a part of rather than a complication. Laryngitis is not so frequently found but may occur early and prove serious. Pleurisy may also be considered a part of the disease. Either acute or chronic, it usually corresponds to the location of the pneumonia, but may occur on the opposite side. Exudates may be overlooked during the disease and become apparent only after resolution. Large effusions may embarrass both heart action and respiration. While in the lung the pneumococci seldom produce suppuration, when found in the serous membrane they invariably do so. Empyema usually occurs during resolution. Pneumothorax is usually the result of empyema rupturing into the bronchus or lung. Abdominal symptoms may be due to actual intestinal disease started by the pneumococcus. Peritonitis is one of the most serious complications, but when the subsequent health and life of the patient is taken into consideration cardiac complications may be of the greatest importance. Acute endocarditis is readily overlooked because physical signs are not well marked. Pericarditis is common with its characteristic symptoms. Vascular lesions in the lower extremities may be due to thrombosis. Albuminurias are mostly of transient character and present symptoms usually found in acute inflammation of the kidney. Jaundice arises from retention of bile, impaction of bile ducts, hypostatic congestion, toxemia or hemolysis, and is probably an accidental though serious complication. Meningitis is a complication common in pneumonia and usually occurs during the acme of the disease. Pneumonia and pulmonary tuberculosis may so resemble each other in atypical cases that differentiation is difficult. All atypical cases of pneumonia should be regarded with suspicion. A list of complications of pneumonia is not complete unless appendicitis is included.

The paper was earnestly discussed by Drs. Wadsworth, Andrews, Trent, Ball, Quick, Mix and Peyton, the latter believing that when jaundice is discovered as a complication of pneumonia it is likely that the jaundice antedated the pneumonia.

Adjourned. H. D. FAIR, Secretary.

FORT WAYNE MEDICAL SOCIETY

Meeting of Sept. 21, 1915

The Fort Wayne Medical Society met in regular session at the assembly room of the Court House, twenty-three members being present. The meeting was called to order by President Rhamy. The minutes of the two preceding meetings were read and approved as read.

Mrs. Gilpin presented a plan by which doctors would be enabled to establish and maintain a separate switchboard in the telephone exchange, placing in charge a competent girl who could take care of all calls in the absence of the physician. The expense has been estimated at about $2 per month. No action taken.

CLINICAL CASE NIGHT

Dr. Miles Porter, Jr., presented the following case:

CASE REPORT

E. S., male, aged 21.

Family History.—Marked alcoholism. Otherwise negative.

Past History.—Negative except for gonorrhea two years ago, from which he felt quite recovered and has felt no symptoms since.

Present History.—A year and a half ago following an initiation which had gotten him into fairly nervous condition, had a "spell," as he called it, of extreme nervousness so marked that he had to be taken home in a conveyance and from which it took him several hours to recover. Has been subject to similar attacks of nervousness ever since, characterized chiefly by agonizing sense of unrest, tachycardia. Feels as if he were going to fly to pieces. These were brought on chiefly by being on crowded streets, walking under the elevated tracks and being in other similar crowded or busy places. Apparently a typical claustrophobia. He had been alternately better and worse at the time I first saw him. Nov. 1, 1914. Blood Wassermann twice negative, spinal fluid Wassermann twice negative but the spinal fluid was under greatly increased pressure, contained a trace of globulin and a high cell count, 24. Following an intravenous injection of 0.45 gm. of neosalvarsan, positive Wassermann was

found. On intravenous neosalvarsan, mercury and iodid, he improved considerably and was able to go back to work. Before this time he had been unable to get down town at all, although once having reached his place of business he might probably have been able to do his work. Continued to improve until six weeks ago, at which time he complained of a peculiar sensation in his head, and of things looking funny. He is unable to describe these further than that the head sensation is that of being light headed and that things look as if his pupils were greatly dilated. His symptoms increased until even at home and remaining perfectly quiet he would have several of these attacks in twenty-four hours. Three weeks ago he received intraspinous injection of mercurialized serum, at which time his spinal fluid showed positive Wassermann. Following the injection he had an intense headache for six days but otherwise no reaction. A week ago I attempted to give him an intravenous neosalvarsan but had no sooner inserted the needle than he complained of very rapid heart action and of feeling very badly without being able to say how. Part of the injection was made and he was then told to remain quiet in bed. His heart rate was then 110, respiration quiet and not fast. In a very few minutes he began to perspire very profusely and his head and face, in contrast to the rest of his body, became quite cyanotic. Pulse rate 110, but very weak. Within a couple of minutes he had lapsed into partial unconsciousness after complaining of peculiar feeling in his lips, mouth and throat, and sense of fulness that caused him to spit continuously. He was given 1/20 grain of strychnin hypodermically. His pulse rapidly improved in quality but the rate remained about the same. He regained complete consciousness in about ten minutes, but still complained of the peculiar sensation in his lips, throat and mouth. Physical examination showed nothing but many bubbling râles profusely scattered through both chests. Two or three hours later his chest had cleared up, pulse rate was 90, good quality in so far as could be determined. Physical examination entirely negative. He was, however, very hoarse and still complained of the distress in the throat. Since that time on several occasions he has had mild attacks of similar character which alarmed him considerably, and the agony of which he says is terrible but cannot describe. He is distinctly not dyspneic, although he says his breathing is funny. He has no pains and says he does not feel as though he were going to die. However, he acts as though he were in the agony of impending death. In the last three weeks he has been pretty afraid of losing his mind and says that things do not all seem right around the house at times, as if something mysterious were going on and yet he is conscious that these things are abnormal within a very short time. For the last few days he has been on rather heavy doses of bromides and his extreme nervousness has abated somewhat, but he is still unable to leave the house.

A patient under treatment for syphilis for some time developed all the symptoms of typhoid. A positive Widal was obtained. Within a few days suppuration in the axillary glands developed. Case recovered.

DISCUSSION—FIRST CASE

Dr. Edlavitch: I saw this patient when Dr. Porter first began to treat him. It seems that he has gone backward rather than improved. There are some features that suggest dementia praecox. Just what relation a positive Wassermann has to dementia praecox is a matter for speculation. A number of investigators have done work on the relation of syphilis to dementia praecox. It is difficult to understand, if this case is syphilis, just the sequence of events. Is it acquired syphilis or an inherited form? Surely it is unusual to see just such a course of symptoms in cerebral syphilis.

Dr. Rhamy: In an article on diseases of the nervous system, in that class of cases usually ascribed to syphilis, 30 per cent. of the cases gave a positive Wassermann. I reported a case of Meniere's disease with a positive Wassermann reaction cured by antisyphilitic treatment.

Dr. Porter, in closing: I think that there is no doubt that this individual has syphilis. I think he will go insane. He has been flooded with antisyphilitic treatment. I am interested in knowing what happened when I put the needle into his vein. I first thought that it was an embolus and I expected to find evidence of pulmonary infarct, but it did not appear. I am inclined to believe that these symptoms were due to intracranial pressure. The spinal fluid is under terrific pressure and it easily spurts 2 feet before it drops on opening the canal.

Dr. B. W. Rhamy reported a case of blastomycosis of the skin.

In June, 1913, Dr. Carey and myself reported a case of sporotrichosis. Up to date there have been only two such cases reported in Indiana. I wish to present this evening a meager report of a third case of this kind. About a month ago a traveling salesman came into my office for the purpose of having an autogenous vaccine made for a supposed acne infection. He stated that he had tried all sorts of drug appliances without benefit and that his physician had advised an autogenous vaccine. I made cultures and smears and took his address. Unfortunately this was all the data I obtained in the case. The next day on examination of the smears I found, instead of an acne pus, a sort of fibrinous exudate which was literally a pure culture of blastomyces. The lesions occurred principally on his body, although there were a few on his face and legs. They looked like large acne pustules, say half as large as a grain of rice or wheat, not closely packed together but several inches apart and distributed over the trunk. The white pus-like appearance of the lesions was due to the fact that there was almost a pure culture of the organism inside.

I believe that time will show that these infections are not as infrequent as we believe.

Dr. Beall reported the following case:

Mrs. L., aged 46, had two general convulsions twenty-one years ago, immediately following birth of last child. Two years later began to have attacks lasting about ten days, and consisting of convulsive movement of right arm and jerking of right face. This jerking would become quite severe and then she would have a number of general convulsions. These attacks occurred about once a year until the last six months when she has had two of these attacks. Personal and family history negative; physical examination negative. Blood and urine negative. Spinal fluid and serum both showed faintly positive Wassermann. Diagnosis, cortical syphilitic meningitis.

Mr. R., aged 34, ever since severe head injury, twelve years ago, has had one or two severe attacks of headache each week, and lately this has been accompanied with some dizziness and nausea. History of syphilis eighteen years ago. Physical examination

negative, except left pupil is larger than right; both react to light. Ten days of antisyphilitic treatment stopped the headache and the dizziness.

Communication of Secretary Gott of the State Board of Medical Registration and Examination read. Motion carried that it is the feeling of the Allen County Medical Society that the board of examination and registration should proceed to get a transcript of the evidence and such other documents as are necessary in proceeding in the revocation of the license of Dr. George Thain.

A statement of the revised fee schedule of the General Fire and Life Insurance Association of Scotland read. Motion carried that a committee of three be appointed to proceed to investigate this schedule and report back to the society in two weeks. The president appointed Drs. Calvin, Beall and Porter.

The applications of Drs. Stultz and Metcalf acted on favorably by the board of censors. A motion carried that the rules be suspended and the secretary cast a unanimous ballot of this society for Drs. Stultz and Metcalf. Ballot was so cast.

Society then adjourned.

Meeting of Sept. 28, 1915

The Fort Wayne Medical Society met in regular session at the assembly room of the Court House, twenty-nine members being present. The minutes of the previous meeting were not read, owing to the temporary absence of the secretary.

Dr. Bruggemann announced that the State Medical Society had been extended an invitation to hold the 1916 meeting in Fort Wayne. A motion was then made and carried that the president appoint a committee of three to be known as the committee of arrangements, and that said committee have the power to appoint subcommittees.

CLINICAL CASES

Dr. G. W. McCaskey reported a case of auricular fibrillation and showed electrocardiograms illustrating the tracings from the normal heart and also from this case. The characteristic features of the electrocardiogram are absence of the P wave which is due to a physiologic contraction of the auricle and its replacement by a series of very irregular, inadequate and partial contractions of different parts of the auricle. As the regular rhythm of the ventricle is dependent on the regular physiologic contractions of the auricle, an extreme grade of ventricular arrythmia results. This was clearly shown in the very irregular spaces of the ventricular complex.

Dr. McCaskey also reported the case of a woman, aged 49, who entered the hospital, June 24, 1915, with all the symptoms of a spastic paraplegia without indications of involvement of other than the crossed pyramidal tracts, excepting slight paresthesia and aching which are common in such cases. A trace of albumin was present in the urine and the phthalein output was from 16 to 20 per cent. She could only walk with assistance. Knee jerks grossly exaggerated, slight Babinski, pupils normal, eye grounds normal, no impairment of sensation of any kind anywhere, blood and spinal fluid Wassermann both negative; the spinal fluid contained 3 cells per cubic millimeter with no increase of globulin; no tremor, no speech disturbances. Physical examination otherwise entirely negative. Blood: hemoglobin 70 per cent., 7,000 leukocytes, polymorphonuclears 65, small mononuclears 33, transitionals 2.

The patient left the hospital in a month without much change. Two months later patient was seen in consultation at her home when identical findings were secured in blood, spinal fluid and urine, although the patient was bedridden and the limbs spastic and undergoing contractures with marked hebetude and rapidly increasing asthenia. She died two weeks later without any new developments.

No necropsy was secured, but death was probably due partly to latent kidney disease, the lesion of the cord being interesting from the fact that it was limited to the crossed pyramidal tracts and that no clinical or laboratory evidence of syphilis could be obtained, the spinal fluid being absolutely normal both while in hospital and two weeks before death.

DISCUSSION

DR. BRUGGEMANN: Most cases of spastic paraplegia, with disappearance of the knee jerk, prove to be multiple sclerosis.

DR. MCCASKEY, closing: This case was an old case. Certainly the condition was sufficient to produce death. There was present no indication of brain disease.

Paper of the evening, "Gonococcus Complement Fixation Test in the Diagnosis of Chronic Gonorrheal Infection," Dr. B. W. Rhamy.

DISCUSSION

DR. WEAVER: I have had a little experience with this test within the last six months, as I had a case of aggravated arthritis to deal with. The arthritis resembled acute rheumatic fever. The knee was the joint most inflamed. She denied gonorrheal infection. She gave a positive reaction to the complement fixation. In a paragraph that I ran across tonight was a report in which the specificity of this test was not given as high as the essayist has given it. Personally, I feel that the test is of value in endocarditis, in arthritis and in chronic vaginitis, especially in children.

DR. EBERLY: I follow the same technic as the author has outlined. I had a case of arthritis which was supposed to be gonorrheal, in which occurred a positive fixation test. He was given a polyvalent vaccine without relief. Large doses of salicylates cured him. I feel that the test will become more frequently used in the future.

DR. MCCASKEY: I believe that the test has a great value and will have an increasingly wide application, in larger and larger groups of cases, as the pathogeny of the Neisser organism is better understood.

He cited three cases coming under his personal observation of fatal malignant endocarditis due to this infection. In one of the cases the organism was demonstrated in the scrapings from the cardiac valves obtained at necropsy. In another case an acute fatal endocarditis was apparently produced by the traumatism caused by introduction of a steel sound in the early stage of the urethral infection. He believed that the traumatism was the atrium of entrance of the organism which led at once to a septicemia and endocarditis. This case illustrated the obvious danger of traumatizing a mucous surface, the seat of a virulent infection by a highly pathogenic microorganism.

DR. BULSON: I know that this test is going to be of importance to the ophthalmologist. In a case of iritis with arthritis diagnosed as rheumatic iritis, salicylates were of no value. The patient was put on a polyvalent vaccine and got well. In this case the fixation test would have been of great importance.

There is no class of cases that I more hate to treat than the one included in gonorrheal iritis.

Dr. Porter: Do I understand correctly that this test was positive in 100 per cent. of cases of acute endocervicitis? If this is true, how do you account for this percentage when you have such a low percentage of positive reactions in gonorrheal pus tubes?

Dr. Rhamy: Because of the accessibility to the blood stream through the uterus.

Dr. Bulson: Can a clean bill of health be given an individual if he has a negative fixation test two weeks following the cessation of the discharge?

Dr. Rhamy closed the discussion.

The application of Dr. Bartholomew was read and referred to the board of censors.

Society then adjourned.

G. Van Sweringen, Secretary.

DELAWARE COUNTY

Meeting of Nov. 5, 1915

Regular meeting of the Delaware County Medical Society was held in the Muncie Y. M. C. A. building, Friday evening, November 5, and was called to order at 8:15 by Pres. C. Melvin Mix, M.D.

Moved and carried that the president appoint a committee to attempt to secure a column in one of our daily papers, to be under control of the Delaware County Medical Society, to contain articles on medical and hygienic matters of general public interest, contributed by members, and under the editorial management of the society's secretary. The president appointed Drs. L. L. Ball, D. M. Green and I. N. Trent.

Dr. Trent moved that the chair appoint a committee to arrange for the society's annual banquet, with full power to arrange every detail. Motion seconded and carried. The president appointed Drs. Jackson, Bucklin, Cowing, Poland and Hill.

The application of Dr. Clarence Bock was returned by the censors, properly endorsed, and the society voted Dr. Bock into membership.

Dr. O. E. Spurgeon read a paper on "The Management and Treatment of Pulmonary Tuberculosis," saying: I have heard it said that when we put off making a diagnosis until tubercle bacilli appear in the sputum it is a late diagnosis, but it has been my experience that bacilli may be found in the sputum while the physical signs are very imperfectly developed, and that in many advanced cases the physical signs as revealed by auscultation and percussion are not sufficiently clear to make a positive diagnosis. In recommending a climate it is best to select one where the patient can remain out of doors, obtain good food, good water, proper medical supervision and congenial surroundings. Of two patients under the same conditions one may improve and the other get worse rapidly. I had a patient who lost 16 pounds in two weeks in Arizona. Other things being equal, a patient fares better in his natural climate. The educational features of the sanatorium are usually of more value to the patient than the therapeutic. I have found mercury succinimide very valuable in some cases, but the injection of this remedy often caused severe pain lasting hours or days. I regard K. I. as a valuable adjunct; it is a good expectorant. Tuberculin is of some value in some cases but in my opinion it is a good drug to let alone, as it is probably the most dangerous treatment on the market and is responsible for the death of many patients who might have been cured if properly treated. Dr. Spurgeon here quoted the words of Dr. L. F. Flick: "The tubercle bacillus in itself does little harm and rarely causes death. Could the streptococcus and staphylococcus be kept out, it would continue throughout life without serious consequences." Physicians everywhere are agreed that whatever else is done for a patient he should have plenty of water, plenty of rest and plenty of fresh air.

Dr. C. A. Ball: Tuberculosis frequently begins in childhood. There is a difference between clinical tuberculosis and latent tuberculosis. We can safely assume that the patient with the characteristic signs of tuberculosis *is* tubercular. I consider rest in bed of the most importance in treatment, drugs ranking fourth.

Dr. Virgil Gordon spoke of other diseases simulating tuberculosis, and of tuberculosis acting like something else, and made a few excellent points in diagnosis.

Dr. D. M. Green said that one of the greatest problems with which the patient had to contend was the incompetent advice of well intentioned but ignorant neighbors and relatives.

Dr. Spurgeon's paper was also discussed by Drs. Sellars, Cowing, Quick and Mix.

Adjourned. H. D. Fair, Secretary.

DUBOIS COUNTY

Dubois County Medical Society met in regular session at Jasper, November 17.

Meeting called to order by President O. A. Bigham. Minutes of previous meeting read and approved. Treasurer's report read and approved.

Dr. Harvey K. Stork of Huntingburg elected to membership.

Dr. Will Shimer of Indianapolis gave an informal talk on "The Relation of the Laboratory to the General Practitioner." Dr. Shimer's talk cleared up some points which apparently had been little understood, and was generally very instructive and interesting. The talk received a well-merited general discussion.

Following Dr. Shimer's address the society elected officers for the ensuing year: president, U. G. Kelso, Dubois; vice president, Joseph Casper, Jasper; secretary-treasurer, H. M. Baker, Holland. Next meeting will be held at Huntingburg.

The society took special action on plans for entertaining the Third District Society which meets at Huntingburg, May 7, 1916.

Adjourned. Herman M. Baker, Secretary.

ELKHART COUNTY

October Meeting

Meeting of October 7 called to order at 2:15 p. m. by President Haywood in K. P. rooms, Nappanee. Minutes September session read and approved.

Paper: "Syphilis of Brain and Spinal Cord," Dr. S. C. Wagner, Wakarusa.

Syphilis occurring in the central nervous system may be either hereditary or acquired. The latter form of infection may show involvement of the brain or spinal cord from one to thirty years after the initial sore. Traumata, sepsis, inherited nervous tendency, excessive physical exercise, alcohol, mental strain and overwork increase the vulnerability of nerve tissue to the luetic poison. The arteries of the brain and

spinal cord are first invaded and the inner and outer coats of vessels become infiltrated and thickened. Then the inflammation spreads to the meninges, causing an exudative meningitis, and finally destruction of brain tissue and cranial nerves. The base of the brain most frequently shows the typical picture of thickened membranes and gummatous infiltration. Near the cortex there is a cerebritis, while deeper in there is softening or hemorrhage from arterial thrombosis or rupture of arterial walls. This form of meningitis more commonly occurs between the cerebral peduncles and at the anterior perforated space, especially the lenticular nucleus and the internal capsule. The syphilitic process causes damage to the brain by pressure, by inflammation and elaboration of toxins, by sclerosis, by softening and hemorrhage and by involving the cranial nerves.

As in the brain, syphilis of the spinal cord is a disease of the meninges, nerve-roots and blood vessels beginning with the characteristic endarteritis.

No set of symptoms is pathognomonic of syphilis of the brain or spinal cord. Symptoms may be exceedingly irregular, sometimes, showing a rapid progress of the disease and then a recession, or it may remain for a long period stationary. Various parts of the central nervous system are invaded. This gives rise to a multiplicity and variability of symptoms.

Constitutional syphilis shows pupillary changes as follows: (1) inequality of pupils, (2) unequal response to light, (3) complete immobility of the pupils, both to light and during accommodation, and (4) a marked departure from the circular form in cases where iritis may not have previously existed. Chronic forms of headache, with insomnia, vertigo, psychical changes, drowsiness, stupor, confusion, dementia, delirium, maniacal excitement, general and focal convulsions, optic neuritis and primary optic atrophy. "Syphilis puts its sign manual on the third nerve." Various involvements of branches of oculomotor nerve and of the sixth and seventh nerves. Differential diagnosis of brain gummata from brain tumor.

Spinal cord syphilis—meningitis and meningomyelitis—shows pains and palsies. Pains are initial features and are of extreme intensity with marked tendency to nocturnal exacerbation. Pains are usually located in the lower extremities—they are root pains marked by tenderness along the nerve trunks, herpes and glossy skin. Palsies are characteristically incomplete—involving motor and sensory groups. "In ataxic paraplegia the symptoms are of insidious onset, developing in a few weeks, months or years. First symptoms are feelings of heaviness and paresthesia in the legs, very soon accompanied by difficulty in emptying the bladder. Rigidity and spasticity in the legs soon develop and the uncertain gait and adductor knees and dragging toes appear. Knee jerks, rectus and ankle clonus and the toe sign are commonly well marked and muscular strength is more or less reduced. It seldom reaches the stage of complete helplessness."

Salvarsan and the Wassermann reaction have revolutionized the treatment of the disease. Dangers of salvarsan. Repeated salvarsan injections combined with mercury and iodids.

Paper: "Results and Interpretation of Wassermann Test," Dr. E. M. Hoover, Elkhart.

The Wassermann test was given to the medical profession in 1906 and has since enjoyed a rapidly growing popularity. In view of the great importance placed on this means of diagnosis, it may not seem unnecessary to inquire into its present status and to endeavor to estimate the results of its introduction.

Serodiagnosis of syphilis has resulted, both directly and indirectly, in a better understanding of the nature of the disease. Hereditary syphilis in its former concept has been found to be nonexistent and Colles' law to be false. Because of the Wassermann test, it is now known that the disease is transmitted to the third generation and that many obscure lesions are syphilitic in origin.

The test is of recognized importance both in the diagnosis and in the progress of syphilis, but its limitations must be recognized.

An estimation of the value of the Wassermann test must take into consideration the general competency and honesty of the laboratory worker and the ability of the clinician to interpret results of the test.

Discrepancies in the reports of serologists are due largely to the fact that the antigen has not yet been standardized nor a uniform technic agreed on.

A positive Wassermann does not prove that the patient has syphilis nor a negative reaction that syphilis is not present. In early chancre the blood is constantly negative and in late syphilis frequently so. Alcohol may render the serum of a luetic patient temporarily negative, while a transient acidosis, according to Keyes, Jr., frequently renders the blood of healthy persons Wassermann positive. Other diseases, among them are cancer and tuberculosis, not infrequently give a positive Wassermann.

A diagnosis of syphilis is not justifiable when based on the Wassermann test, unsupported by clinical evidences. A negative Wassermann gives no information as to the presence or absence of syphilis. When a Wassermann is carefully done and the clinical evidences faithfully investigated, they will be found to parallel each other quite closely. When they do not agree the difficulty usually lies with the clinician, because, as a rule, he employs less care than does the laboratory worker. However, the laboratory investigator must ever bow to the clinician, the latter being the final arbiter as to whether syphilis is, or is not, present.

The complement-fixation test for syphilis is highly esteemed by the foremost specialists in this disease. This fact should win respect for the test. Every one of the recognized ways of performing the test should yield a large percentage of accurate results. The conflictions and discrepancies in the various reports do not invalidate the test to any large extent. As compared with the luetin test, the Wassermann yields more positive results in early syphilis, while the former is more often positive in late and congenital syphilis.

DISCUSSION

W. A. PRICE, Nappanee: Syphilis of central nervous system always tertiary. Case cited—general paresis, bladder symptoms, irregular contraction of pupils, no evidence of iritis, passed into state of coma with convulsions and died.

P. B. WORK, Elkhart: In biologic work, reagents used are specific. In Widal test, pure culture of typhoid bacilli is used. Exception in case of Wassermann, in which test is used an emulsion of ox-heart, an antigen having no relation to syphilis. First used emulsion of syphilitic liver; then found it was possible to get as good or better results with ox-heart. Using spirochete gave different reaction from that given by ox-heart emulsion, which gave same reaction obtained with luetic liver. Interesting to note different

results obtained by different men. Case cited, man in army exhibiting adenopathy, skin lesions, etc., went to a physician who made a diagnosis of syphilis. The patient then sent specimens of his blood to three other men. Then he went to army surgeon who had had experience in tropical diseases and he made a correct diagnosis of a tropical disease. Sociologic aspect of disease discussed.

A. C. Yoder, Goshen: Two interesting cases in past year. Case 1: Inmate county infirmary, Wassermann partially positive, hemolysis not complete, enlarged glands in groins, enlargement of scrotum and lower legs, fever and cardiac incompensation. Physicians who saw case in consultation agreed a diagnosis of syphilis. Case 2: Male, aged 50, section hand, eight or ten years ago had skin eruption and other symptoms sufficient to make diagnosis of syphilis. Treatment for one year with steady improvement. Six months ago came in with pulse 100-120. Said he had the "grip" and couldn't get over it—showed fever, cough. Report on sputum sent to Indianapolis, negative. Pulse remained high. No exophthalmos. Five c.c. fluid aspirated from left pleural cavity. Blood sent to Chicago reported positive Wassermann. Has improved on antiluetic treatment. Repeated aspiration has obtained fluid from pleural cavity each time. Pneumothorax resulted with no great inconvenience. Has given patient mercury salicylate emulsion in olive oil. S. P. Temp. 98.6 to 100. Pulse 102-110. Slight edema below knees. Meautiful case of syphilis of lungs and heart.

J. C. Fleming, Elkhart: Eighty-five or 90 per cent. of syphilitics are probably never cured. Apoplexy in person of 50 is either syphilitic or nephritic. Dilated heart and aorta shown by Roentgen ray. Paralysis of eye muscles, particularly ptosis, is indication of syphilis. Can we expect any more in cases of tabes and general paresis from injection of salvarsan? Cannot eliminate possibility of syphilis by no response to antisyphilitic treatment. Case of man who took to mumbling his words, loss of speech, loss of ability to describe certain objects and amnesia. Recovered under antisyphilitic treatment. Another case of hemiplegia and convulsions which died in spite of active treatment.

C. L. Amick, Wakarusa: Do not make Wassermann until patient has been off treatment three weeks. Spinal fluid shows positive Wassermann in 33⅓ per cent. more cases of syphilis of nervous system than the blood shows. Intraspinal injection of salvarsan giving good results in some cases.

J. A. Work, Sr., Elkhart: It is within the province of medical profession to educate the laity as to the results of venereal infections. Advocates extensive education in prophylaxis.

M. K. Kreider, Goshen: Cited case of sore throat diagnosed as tuberculosis, which proved to be secondary syphilis. Does not use sera in treatment of syphilis. Uses a special preparation—"syphininum"—gives one dose and patient is cured!!!

D. L. Miller, Goshen: There is a ruling by State Board of Health that all cases of syphilis be reported. Syphilis will never come under control till they are reported. Members of society urged to report cases.

C. W. Haywood, Elkhart: Case cited: Came because he could not read, saw double. Second visit patient had unequal pupils, third visit ptosis. Diagnosis, cerebral syphilis. Finally was bedridden, unable to feed himself. Improved under treatment. Then developed maniacal attacks at night. Now able to be about, ptosis gone. Diplopia gone but every week or two has attacks of outbursts of anger and violence. Will doubtless, in time, have a cerebral hemorrhage and die.

E. M. Hoover, closing: Question of diagnosis in syphilis very important. Believes it should be decided in every case. When a positive Wassermann is reported in a given case who has not sufficient clinical evidence another should be made and others, till a fair degree of assurance is obtained. We are not so sure of a cure since the Wassermann. Cases formerly considered cured are shown not to be cured. Believes the luetin test should be used also. The longer the disease has gone toward latency, the more surely positive is the test.

Business session. Board of censors reported favorably on name of G. W. Grossnickle, Elkhart, for membership. Candidate elected to membership by vote of society. Motion made and carried that transfer of C. L. Amick, Wakarusa, from Putnam County be accepted. Candidate elected to membership by vote of society. Report of G. W. Spohn, delegate to state meeting at Indianapolis, read by secretary. Bill of $4.75 for printing programs allowed by vote of society. Twenty-two members present.

James A. Work, Jr., Secretary.

HANCOCK COUNTY

Hancock County Medical Society met at Greenfield at 8 p. m., November 11, Dr. C. K. Bruner presiding.

Different members of the society referred cases, and Dr. F. W. Cregor of Indianapolis conducted a very interesting clinic on the cases. At the close of the clinic Dr. Cregor read a very interesting and instructive paper on "Syphilis, Its Cause, Symptoms and Treatment." Special stress was laid on the treatment or cure of the disease. Paper was freely and favorably discussed.

Adjourned. J. L. Allen, Secretary.

MONTGOMERY COUNTY

Montgomery County Medical Society met in the office of Dr. H. W. Sigmond, Crawfordsville, November 16, with thirty members present.

Professor Anderson of Wabash College spoke on the Bulgarian plant and Bulgarian bacilli culture.

Dr. N. A. Cary reported on the newer things of surgery, and Dr. George Williams on medicine.

Dr. Thomas J. Griffith was appointed to prepare data and facts relative to the Montgomery County Medical Society for the Centennial Committee of State.

Dr. Sigmond gave an exhibition of Roentgen-ray work, diagnostic and skiagraphs.

Drs. Green, Barcus and Cooksey were appointed to arrange for the Ninth District meeting in May.

Dr. Hugh T. Patrick was announced as the speaker at the next county meeting, December 21. The doctors of adjoining counties are invited to meet with us at the next meeting.

Adjourned. Thomas L. Cooksey, Secretary.

ST. JOSEPH COUNTY

The thirteenth special annual meeting of the St. Joseph County Medical Society was held at South Bend, Oliver Hotel, November 17. The following scientific program was carried out during the afternoon and evening: "Hyperemesis Gravidarum," James

B. Gooken, South Bend; "The Differential Diagnosis of Hyperthyroidism," A. C. Kimberlin, Indianapolis; "Defective Children," L. Park Drayer, Fort Wayne; "Pulmonary Abscess," C. G. Jennings, Detroit, and a diagnostic clinic and address by Dr. George W. Crile of Cleveland, in the evening. Dinner was served at 6:00 o'clock at the Oliver Hotel.

WAYNE COUNTY

Wayne County Medical Society met in regular session Dec. 1, 1915, and elected the following officers to serve the ensuing year: president, A. L. Loop, Economy; vice president, R. D. Morrow, Richmond; secretary, A. J. Whallon, Richmond; treasurer, L. M. Gentle, Richmond; censors, L. F. Ross, Richmond, A. L. Bramkamp, Richmond; J. N. Study, Cambridge City. Delegate to State Association, two years, S. C. Markley, Richmond; alternate, J. E. King.

A. J. WHALLON, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

BISMUTH TRIBROMPHENATE.—Basic bismuth tribromphenate. It is claimed to be a non-irritant and non-toxic antiseptic and an odorless and efficient substitute for iodoform. It is said to be of value in gastro-intestinal catarrh, proctitis, dysentery, diarrheas, etc. Merck & Co., New York (*Jour. A. M. A.*, Nov. 13, 1915, p. 1731).

BUTYL-CHLORAL HYDRATE, MERCK.—A non-proprietary brand of butylchloral hydrate admitted to New and Nonofficial Remedies. Merck & Co., New York (*Jour. A. M. A.*, Nov. 13, 1915, p. 1731).

ETHYL BROMIDE, MERCK.—A non-proprietary brand of ethyl bromide admitted to New and Nonofficial Remedies. Merck & Co., New York.

HOMATROPINE HYDROCHLORIDE, MERCK.—A non-proprietary brand of homatropine hydrochloride admitted to New and Nonofficial Remedies. Merck & Co., New York.

SODIUM CACODYLATE, MERCK.—A non-proprietary brand of sodium cacodylate admitted to New and Nonofficial Remedies. Merck & Co., New York.

IODOTHYRINE TABLETS, 3 GRAINS.—Each tablet contains iodothyrine 3 grains. The Bayer Company, Inc., New York.

THYRESOL PEARLS, 5 GRAINS.—Each pearl contains thyresol 5 grains. The Bayer Company, Inc., New York.

THEOCIN-SODIUM ACETATE TABLETS 1½ GRAINS.—Each tablet contains theocin-sodium acetate 0.1 Gm. The Bayer Company, Inc., New York.

AMPULS EMETINE HYDROCHLORIDE, MULFORD 1/12 GRAIN.—Each ampule contains emetine hydrochloride 0.005 Gm. H. K. Mulford Co., Philadelphia.

AMPULS EMETINE HYDROCHLORIDE, MULFORD 1/3 GRAIN.—Each ampule contains emetine hydrochloride 0.02 Gm. H. K. Mulford Co., Philadelphia.

AMPULS EMETINE HYDROCHLORIDE, MULFORD, 2/3 GRAIN.—Each ampule contains emetine hydrochloride 0.04 Gm. H. K. Mulford Co., Philadelphia.

AMPULS SODIUM CACODYLATE, MULFORD, 1½ GRAINS.—Each ampule contains sodium cacodylate 0.1 Gm. H. K. Mulford Co., Philadelphia.

AMPULS SODIUM CACODYLATE, MULFORD, 3 GRAINS.—Each ampule contains sodium cacodylate 0.2 Gm. H. K. Mulford Co., Philadelphia.

AMPULS QUININE AND UREA HYDROCHLORIDE, 1%, MULFORD.—Each ampule contains 5 Cc. of a sterile 1 per cent. solution of quinine and urea hydrochloride. H. K. Mulford Co., Philadelphia.

AMPULS MERCURY SUCCINIMIDE, MULFORD, 1/6 GRAIN.—Each ampule contains mercury succinimide 0.01 Gm. H. K. Mulford Co., Philadelphia.

CALCIUM PEROXIDE, P. W. R.—A non-proprietary preparation of calcium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

MAGNESIUM PEROXIDE, P. W. R.—A non-proprietary preparation of magnesium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

SODIUM PEROXIDE, P. W. R.—A non-proprietary preparation of sodium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

STRONTIUM PEROXIDE, P. W. R.—A non-proprietary preparation of strontium peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

ZINC PEROXIDE, P. W. R.—A non-proprietary preparation of zinc peroxide admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

SODIUM PERBORATE, P. W. R.—A non-proprietary preparation of sodium perborate admitted to New and Nonofficial Remedies. Powers-Weightman-Rosengarten Co., Philadelphia.

FORMIC ACID, MERCK.—A non-proprietary preparation of formic acid admitted to New and Nonofficial Remedies. Merck & Co., New York.

AGAR AGAR POWDER, MERCK.—A non-proprietary preparation of agar agar admitted to New and Nonofficial Remedies. Merck & Co., New York.

AGAR AGAR SHREDS, MERCK.—A non-proprietary preparation of agar agar admitted to New and Nonofficial Remedies. Merck & Co., New York.

BERBERINE HYDROCHLORIDE, MERCK.—A non-proprietary preparation of Berberine hydrochloride admitted to New and Nonofficial Remedies. Merck & Co., New York.

FLUORESCEIN, MERCK.—A non-proprietary preparation of fluorescein admitted to New and Nonofficial Remedies. Merck & Co., New York.

MERCURY CYANIDE, MERCK. — A non-proprietary preparation of mercury cyanide admitted to New and Nonofficial Remedies. Merck & Co., New York.

MERCURY AND POTASSIUM IODIDE, MERCK.—A non-proprietary preparation of potassium mercuric-iodide admitted to New and Nonofficial Remedies. Merck & Co., New York.

SWAN'S TYPHOID BACTERIN (No. 44) (PROPHYLACTIC).—Marketed in packages of three 1 Cc. vials and also in packages of six 1 Cc. vials. Swan-Myers Company, Indianapolis, Ind. (*Jour. A. M. A.*, Nov. 27, 1915, p. 1915).

PROPAGANDA FOR REFORM

SWAN'S RHEUMATIC BACTERIN (MIXED) No. 47.—According to the manufacturer, The Swan-Myers Co., Indianapolis, Ind., this preparation contains pneumococci, Friedlaender's bacilli and streptococci (polyvalent). The Council on Pharmacy and Chemistry refused to admit this vaccine to New and Nonofficial Remedies because there is no satisfactory evidence that either the pneumococcus or Friedlaender bacillus is concerned in the etiology of acute or chronic rheumatism or rheumatoid arthritis and no conclusive evi-

dence that the streptococcus is an etiologic factor (*Jour. A. M. A.*, Nov. 6, 1915, p. 1662).

Elixir Iodo-Bromide of Calcium Comp.—The Tilden Company, New Lebanon, N. Y. and St. Louis, Mo., sells "Elixir Iodo-Bromide of Calcium Comp. without Mercury" and "Elixir Iodo-Bromide of Calcium Comp. with Mercury." The latter is said to contain, in addition to the ingredients of the former, 1/100 gr. mercuric chloride in each fluidram. The "formula" of the elixir without mercury is stated to be: "Salts of Iodine, Bromine, Potassium, Sodium, Calcium, Magnesium with Stillingia, Sarsaparilla, Rumex, Dulcamara, Lappa, Taraxacum, Menisperum." Advertising circulars give "formulas" which differ somewhat from the preceding. None of the "formulas" gives the quantities of all of the several constituents. The Tilden Company asks physicians to depend on these preparations in the treatment of syphilis. While it seems incredible that any physician would jeopardize the health—even the life—of a patient by accepting this advice, the fact that certain medical journals advertise these preparations with the caption "The Conquest of Syphilis" made it incumbent on the Council on Pharmacy and Chemistry to record its condemnation of the employment of these unscientific, semisecret mixtures (*Jour. A. M. A.*, Nov. 6, 1915, p. 1662).

The Autolysin Treatment.—There were strong evidences from the beginning of a commercial spirit in the exploitation of this treatment. Letters sent to physicians further illustrate the method of promoting this unproved and possibly dangerous treatment. Dr. Richard Weil, who had the opportunity of personally witnessing the application of this compound in a long series of cases at the General Memorial Hospital, expresses the belief that autolysin is useless, that it adds nothing of value to the methods now generally accepted, and that it often aggravates the sufferings and accelerates the death of the patient (*Jour. A. M. A.*, Nov. 6, 1915, pp. 1641, 1647 and 1662).

Varlex Compound.—This is an alleged cure of the liquor and tobacco habit of the "prescription fake" variety. Advertisements advise the secret administration of: Water 3 ounces, muriate of ammonia 20 grains, Varlex Compound one package, pepsin 10 grains. The A. M. A. Chemical Laboratory reports that Varlex Compound consisted of approximately 97 per cent. milk sugar and 3 per cent. moisture (*Jour. A. M. A.*, Nov. 6, 1915, p. 1663).

Alkalol.—Analysis in the A. M. A. Chemical Laboratory indicated Alkalol, which is advertised as useful in inflammations of the nose and throat, to be essentially an aromatized, weakly alkaline, saline solution contining a small amount of chlorate, probably potassium chlorate; it yielded about 2 per cent. of solids, mainly alkali chlorid, chlorate and bicarbonate, of this 2 per cent. about one half was bicarbonate (*Jour. A. M. A.*, Nov. 6, 1915, p. 1665).

Dr. Charles' Flesh Food.—This is an ointment sold under such claims as "Applied to the skin nourishes by absorption" and "it builds firm, healthy flesh." It is also said to be an efficient bust developer. Analysis in the A. M. A. Chemical Laboratory indicated the following: starch 38.5 per cent., petrolatum 51.0 per cent., zinc oxide 2.0 per cent., impure stearic acid 1.5 per cent., perfume, coloring matter (*Jour. A. M. A.*, Nov. 13, 1915, p. 1747).

Intesti-Fermin.—"May we count on your assistance" ingenuously inquires the Berlin Laboratory, Ltd., in an advertisement appearing in a medical journal, and with cool effrontery continues "We are telling the layman about Intesti-Fermin . . . May we count on your assistance in spreading this message to everyone . . . ?" May they? (*Jour. A. M. A.*, Nov. 13, 1915, p. 1736).

Freckle and Beauty Lotions.—The worthlessness and, in many instances, the dangerous character of nostrums sold as freckle removers and beautifying preparations are indicated by the following analyses, taken from the reports of various state chemists: Hill's Freckle Lotion was found to be a 1.84 per cent. solution of corrosive mercuric chloride. Kingsbery's Freckle Lotion was found to be a solution of corrosive mercuric chloride containing 5.3 parts in 1000. Kulux Compound, a "prescription fake" freckle and tan remover, was found to contain zinc oxide, bismuth subcarbonate, glycerine and water. Mrs. McCorrison's Famous Diamond Lotion No. 1, said to remove moths, freckles, pimples, etc. was found to be essentially a solution of 28.2 parts of corrosive mercuric chloride in 1000 of water. Neroxin, a "prescription fake" said to remove blackheads, was found to contain borax 55 per cent. and "soda" 25 per cent. Othine, sold as a freckle remover, is reported to contain bismuth subnitrate and ammoniated mercury with a fatty base. Perry's Moth and Freckle Lotion Compound was found to be a 16 in 1000 solution of corrosive mercuric chloride containing in addition a small amount of a lead salt. Pyroxin, sold on the "prescription fake" plan as an eyebrow and eyelash grower, was found to be perfumed vaseline. Rose-Kayloin, advertised in fake health departments of some newspapers, was found to contain 80 per cent. sulphate and 15 per cent. potassium carbonate. Mme. Rupert's Face Bleach is reported to be a 4 in 1000 alcoholic solution of corrosive mercuric chloride, containing a small amount of benzoin. Stillman's Freckle Cream was found to be an ammoniated mercury paste. Tan-A-Zin, a complexion beautifier, was found to have for its essential ingredient ammoniated mercury. Sarah Thompson's "Wrinkle Lotion" was found to contain alum 7 per cent., glycerine 29 per cent. and water 64 per cent. Zintone, said to produce a faultless complexion quickly, is reported to contain borax 23 per cent., stearic acid and soap 77 per cent. Though the external use of mercury salts is fraught with danger, the nostrums above shown to contain such poisonous ingredients are sold with the claim that they are practically harmless (*Jour. A. M. A.*, Nov. 20, 1915, p. 1835 and Nov. 27, 1915, p. 1933).

Anesthesin.—Anesthesin is paramino-ethyl-benzoate. New and Nonofficial Remedies states that it is one of the products which owe their existence to the discovery that the local anesthetic action of cocaine is due to the radical of benzoic acid in combination with a nitrogen-containing basic group. Treasury Decision 2184 contemplates the registration of anesthesin under the Harrison narcotic law (*Jour. A. M. A.*, Nov. 20, 1915, p. 1837).

Laxative Bromo Quinine.—From the analysis of the A. M. A. Chemical Laboratory it appears that each tablet of Laxative Bromo Quinine contains, as essential ingredients, phenacetin about 2 grs., caffein 1/5 gr., quinine or cinchona alkaloids 2/5 gr. and aloin or aloes. While the name gives the impression that bromine and quinine are the important ingredients, the bromide content corresponds only to 1/500 part of a pharmacopoeial dose of potassium bromide. In order to get a pharmacopoeial dose of quinine, it would be necessary to take ten Laxative Bromo Quinine Tablets. If this were done, the person would get twenty grains phenacetin, a dangerously poisonous dose. As phenacetin is the essential ingredient of Laxative Bromo Quinine it is evident that this widely exploited nostrum is misbranded (*Jour. A. M. A.*, Nov. 27, 1915, p. 1932).

Iodeol and Iodagol.—Both appear to be iodine preparations. They are advertised as "Electro-Chemical Colloidal Iodine." Iodeol is recommended as "Iodine with all its potentialities . . . stripped of all its drawbacks—non-irritating, non-caustic, non-toxic, non-cumulative, injectable without pain." No ade-

quate evidence is offered in support of the therapeutic claims made for Iodeol and Iodagol, although the assertions as to the action of Iodeol in tuberculosis and pneumonia, in particular, are susceptible of test by laboratory and animal investigation (*Jour. A. M. A.*, Nov. 27, 1915, p. 1935).

BOOK REVIEWS

OBSTETRICS. Volume 7 of the Practical Medicine Series for 1915. Edited by Jos. B. DeLee, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School, with the collaboration of Herbert M. Stowe, M.D. Price, $1.35. The Year Book Publishers, Chicago.

The latest work of importance relating to pregnancy, labor, the puerperium and the new-born is here reviewed in the usual thorough manner. Evidently enough new material has accumulated to make up a volume of over 200 pages. Anyone wishing to keep in touch with this new work will find in this book just what he wants.

GENERAL MEDICINE. Volume 6 of the Practical Medicine Series for 1915. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Illinois Post-Graduate Medical School. Price, $1.50. The Year Book Publishers, Chicago.

In this volume the reviewers take up the infectious diseases and diseases of the alimentary tract. Of the infectious diseases typhoid fever receives the greatest attention, the first 46 pages being devoted to it. Paratyphoid fever is not overlooked in this review.

It was surprising to find no mention in this review of Plotz's work on the organism which he regards as the cause of typhus fever. All other work but his is given.

In the discussion on the infectious diseases a few glaring errors struck our notice: On page 16 "Nepro-Typhoid" is used for Nephro-Typhoid; on page 39 "protatice" is used for protective; on page 80 "Bacillius" for Bacillus, and on page 90 "Tyser" for Tyzzer. When quoting an author surely his correct name should be given. Evidently the proof-reading was not done as well as it is usually.

TEXT BOOK OF MATERIA MEDICA FOR NURSES. Compiled by Lavinia L. Dock, Graduate of Bellevue Training School for Nurses. Fifth edition, revised and enlarged. Price, $1.50. G. P. Putnam's Sons, New York and London. The Knickerbocker Press, New York.

The title expresses just what this work really is. It contains information on the source and composition of drugs, their physiologic actions, signs indicating their favorable or unfavorable results, symptoms of poisoning and treatment of poisoning. Practical points on the handling and administration of drugs are not overlooked. The author has treated her subject in a manner especially suited to the needs of the nurse.

SENESCENCE AND REJUVENESCENCE. By Charles Manning Child, of the Department of Zoology in the University of Chicago. Cloth, $4.00 net. The University of Chicago Press, Chicago.

Such a subject will naturally appeal to the physician more than to anyone else. Perhaps no phase of biology presents aspects of greater interest to the medical man than that of senescence and rejuvenescence. Whatever facts the physician can learn about the nature of the phenomena involved in these obscure physiologic processes ought to help him in his desire to understand the mystery of life. In this book he can find many interesting facts and new ideas that will give him much "food for thought." The author formulates his conception of these biologic changes on the basis of his experimental work in comparative anatomy. The author thus has some basis of fact in support of his views.

Such a work is, indeed, a valuable addition to the literature on a subject that is just being opened up by scientific investigators and thinkers. The subject is so fascinating and such an important one, and our knowledge of it is so pitifully meager, that one may consider himself fortunate to have the opportunity of obtaining from such a book as this so much that is new in this field of scientific study.

A MECHANISTIC VIEW OF WAR AND PEACE.—By George W. Crile. Edited by Amy F. Rowland. Illustrated. Cloth, $1.25. The Macmillan Company, New York, 1915.

This is an exceedingly interesting book. It gives some of the experiences of Dr. Crile while he was a surgeon in charge of a hospital in France, and his analysis of the psychology of war and the impulses which lead to war. Dr. Crile is of the opinion that the impulse to war is stronger than the desire to live. It is stronger than the fear of death. He explains the phenomena of war on the ground that man is a mechanism, evolved through the endless struggle for existence, and that the struggle among men differs only in kind and not in principle from the struggle among other animals or from the equally fierce struggle among plants. He does not believe that war can be eliminated from the web of life, and in this connection one of the statements given in his introduction is worth repeating: "As I reflect on the intensive application of man to war in cold, rain, and mud; in rivers, canals and lakes; under ground, in the air, and under the sea; infected with vermin, covered with scabs, adding the stench of his own filthy body to that of his decomposing comrades; hairy, begrimed, bedraggled, yet with unflagging zeal striving eagerly to kill his fellows; and as I felt within myself the mystical urge of the sound of great cannon I realized that war is a normal state of man."

His solution of the problem is in education, for Dr. Crile believes that education and environment is the mold which predetermines the man. The happiness and serenity of life should be contrasted with the illogical ending of life through war. The disadvantages of war should be set forth in the nursery, the school and the university; in the daily papers, magazines and books; in the web of life of childhood as well as maturity; the consequences of war as well as the glory of war.

Not the least interesting phase of Dr. Crile's book is his analysis of the effect of the emotions, loss of sleep, physical exertion, hunger, thirst and pain on the cells of the brain and liver. Another interesting feature is the study of psychic effect of war on the combatants and noncombatants.

It is hoped that this is but the forerunner of other books dealing with various phases of the war from the surgeon's standpoint, which may come from the pen of such a distinguished observer and scientific man.

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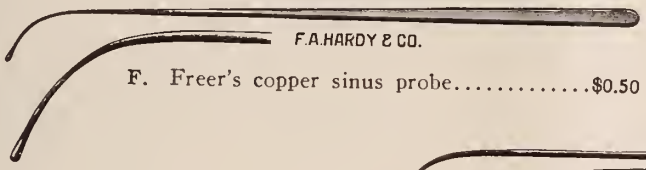

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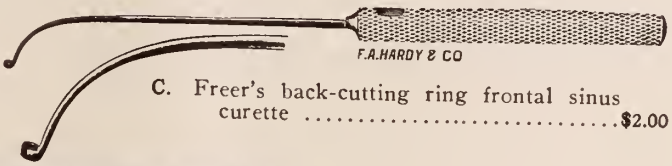

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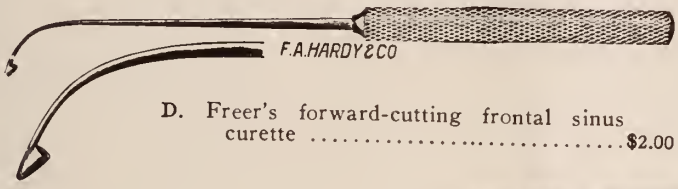

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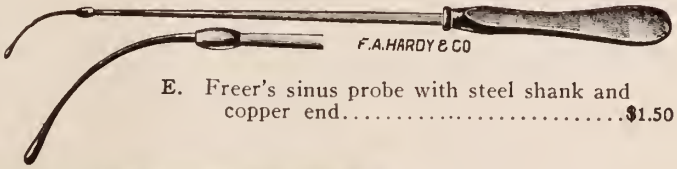

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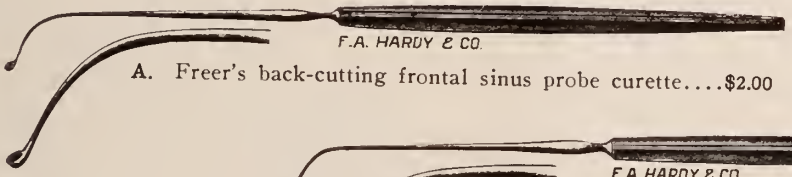

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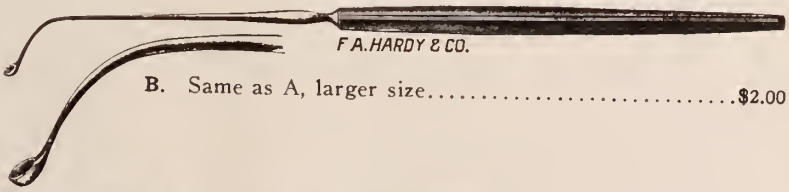

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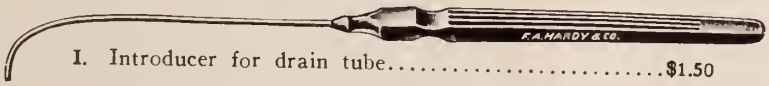

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DR. ALBERT E. BULSON, JR., Editor and Manager
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